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AIR QUALITY MONITORING DATA SUMMARY FOR ALBERTA

1992

Technical Report Series

Alberta
ENVIRONMENT

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AIR QUALITY MONITORING DATA SUMMARY FOR ALBERTA

1992

Technical Report Series No. 93-2b

Prepared by:

R.H. Myrick

Air Assessment Section
Environmental Quality Monitoring Branch
Environmental Assessment Division
Alberta Environmental Protection

December 1993

This report is one in a series of air quality annual reports produced by Alberta Environmental Protection for 1992. The following air quality annual reports are available for 1992:

Summary of Air Quality Monitoring in Alberta: 1992.
Air Quality Monitoring Report for Alberta: 1992 - Technical Report Series No. 93-2a.
Air Quality Monitoring Data Summary for Alberta: 1992 - Technical Report Series No. 93-2b.

For copies of these reports or for more information contact:

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LIST OF ABBREVIATIONS

Monitoring Locations

EDMU	- Edmonton central (downtown) monitoring unit
ERMU	- Edmonton northwest (residential) monitoring unit
EIMU	- Edmonton east (industrial) monitoring unit
CDMU	- Calgary downtown monitoring unit
CRMU	- Calgary residential monitoring unit
CIMU	- Calgary industrial monitoring unit
EMMU	- Edmonton mobile monitoring unit (Fort Saskatchewan)
FMMU	- Fort McMurray monitoring unit
FRMU	- Fort MacKay monitoring unit

Pollutant Parameters

IQUA	- Index of the Quality of the Air
NH_3	- ammonia
CO	- carbon monoxide
CO_2	- carbon dioxide
COH	- coefficient of haze
H_2S	- hydrogen sulphide
NO_2	- nitrogen dioxide
NO	- nitric oxide
NO_x	- oxides of nitrogen
O_3	- ozone
SO_2	- sulphur dioxide
THC	- total hydrocarbons
TSP	- total suspended particulates
BaP	- Benzo (a) Pyrene
Pb	- lead

Units of Measurement

ppm	- parts per million by volume
ppb	- parts per billion by volume
ug/m^3	- micrograms per cubic meter
ug/1000 m^3	- micrograms per 1000 cubic meters
kg/ha/yr	- kilograms per hectare per year
mg/day/100^2	- milligrams per day per 100 square centimeters
mg/100^2/30 days	- milligrams per 100 square centimeters per 30 days
ug/100^2/30 days	- micrograms per 100 square centimeters per 30 days
km/hr	- kilometers per hour
mm	- millimeters
ml	- millilitres
ueq/l	- micro-equivalences per liter
us/cm	- micro-siemens per centimeter

INTRODUCTION

This document is prepared as an appendix to the report entitled "Air Quality Monitoring Report for Alberta: 1992". Data summaries are presented for continuous, intermittent, static and acid precipitation monitoring networks operated by Alberta Environmental Protection.

a) Continuous Air Quality Monitoring

Air pollutants which are monitored on a continuous basis include ozone, carbon monoxide, carbon dioxide, the coefficient of haze, oxides of nitrogen, sulphur dioxide, hydrogen sulphide, total hydrocarbons and ammonia. Concentrations of these pollutants are reported once every hour, 24 hours a day, 365 days a year. In the continuous air quality data section of this report, the Index of the Quality of the Air, wind direction and speed, and concentrations of individual air pollutants are summarized. Individual air pollutants have been analyzed, on an annual, seasonal and monthly basis, to resolve simple statistics which describe the data. Seasons are defined as winter (December, January, February), spring (March, April, May), summer (June, July, August) and autumn (September, October, November) (Trenberth 1983). The subsequent pages contain the following information for each continuously monitored air pollutant: 1) percentiles (which indicate the percentage of observations above and below a specific percentile; i.e., 75% means that 75% of the observations are below or equal to the value indicated and 25% of the observations are above the value indicated); 2) simple statistics such as arithmetic and geometric means, arithmetic standard deviations, range, and the number of observations; and 3) the percentage of time that ambient parameter concentrations exceeded the regulations. Wind direction frequency distributions are generated for times when the regulations were exceeded. Annual average pollutant concentrations of historical data are also included. Statistical procedures used in this analysis are detailed in numerous statistics publications (refer to Zar (1974) and Gilbert (1987)).

Data below the limit of detection (LOD) are estimated by the method described in Gilliom and Helsel (1986). It is assumed that the air quality data above the LOD follows a lognormal distribution. The data below the LOD are fitted to this lognormal distribution by the method of least squares. Initially, normal scores are calculated for all data points above the LOD by the following equations:

$z = F(y)^{-1}(r/n + 1)$; and

$F(y) = r/(n + 1)$;

where F(y) is the cumulative frequency function for the standardized normal distribution, n is the number of observations, r is the order of the observation from the LOD to n and z is the normal score. A least squares regression of concentration on normal scores is then applied. The data below the LOD may then be estimated by the linear regression equation. Percentiles and statistics are calculated from this modified distribution.

b) *Intermittent Air Quality Monitoring*

Intermittent air quality monitoring refers to air pollutants which are monitored as a 24-hour accumulated loading, once every sixth day, according to the National Air Pollution Surveillance (NAPS) system. Suspended particulates, Benzo (a) Pyrene and lead are monitored according to this system. Minimums, geometric means and maximum values are summarized by month for intermittent monitoring parameters. Annual average values of historical data are also provided.

c) *Static Air Quality Monitoring*

Alberta Environmental Protection conducts air quality monitoring, on a static basis, at 51 networks throughout Alberta. Each network consists of at least one monitoring station. Static monitoring is the measurement of total accumulated loadings of pollutants on a one- and three-month schedule. Parameters monitored on a static basis include total sulphation, hydrogen sulphide, dustfall, calcium and fluorides. Static monitoring data are presented as monthly or tri-monthly average loadings for each location. The number of stations at each location is also indicated.

d) *Acid Precipitation Monitoring*

Rain and snow samples were collected, on a monthly basis from January to August and on a weekly basis from September to December, at most stations in 1992. Samples were collected on a daily, weekly and monthly basis at Vegreville as part of the Alberta Environmental Protection Acid Deposition Program. Only monthly data from Vegreville will be presented in this report (daily and weekly data are presented by Peake (1992)). Chemical analysis was conducted on these samples to obtain pH as well as other compounds contained in precipitation. Anion and cation wet deposition rates, and the calculated effective acidity deposition rates are presented for monthly and weekly precipitation samples. Annual pH values were calculated using volume weighted average hydrogen ion concentrations from weekly and monthly samples. Annual anion, cation and effective acidity deposition rates were also calculated simply as the sum of the monthly and weekly values. Anion and cation deposition rates were calculated using the following equation:

$$\text{wet deposition(kg/ha)} = \frac{\text{concentration(mg/l)} \times \text{precipitation depth(mm)}}{100}$$

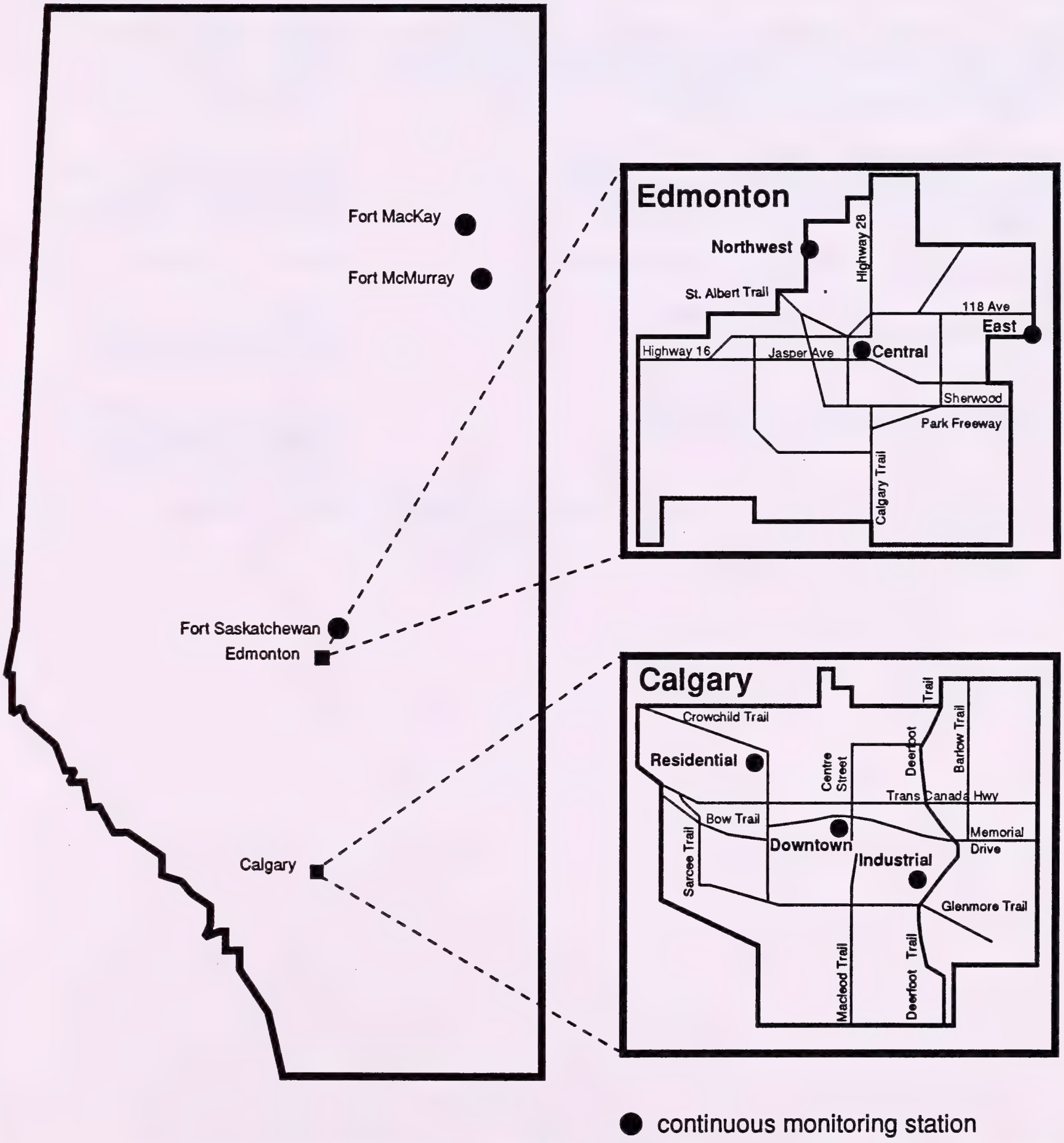
where precipitation depth was calculated using the volume of precipitation in the collector.

Effective acidity (EA) is an approach which has been developed to estimate the degree of acidification which soil would experience as a result of atmospheric inputs. This approach takes into account: (1) direct deposition of acids onto the soil; and (2) the chemical, biological and physical processes which take place within the soil as a result of acid deposition. Effective acidity is described by the equation:

$$EA = [H^+] + 1.15x[NH_4^+] - 0.7x[NO_3^-]$$

where $[H^+]$, $[NH_4^+]$ and $[NO_3^-]$ are concentrations of hydrogen ions, ammonia ions and nitrate ions, respectively, expressed as molar equivalents (Coote et al, 1981). Effective acidity is presented as deposition in kilograms of hydrogen ion equivalents per hectare.

LOCATION OF CONTINUOUS AIR QUALITY MONITORING STATIONS



ENVIRONMENTAL PROTECTION
Environmental Assessment Division
Environmental Quality Monitoring Branch

Location of Continuous Monitoring Stations

Station Name	Station Location
Edmonton Central (Downtown) Monitoring Unit (EDMU)	10255 - 104 St.
Edmonton Northwest (Residential) Monitoring Unit (ERMU)	13335 - 127 St.
Edmonton East (Industrial) Monitoring Unit (EIMU)	105 Ave. and 17 St.
Calgary Downtown Monitoring Unit (CDMU)	611 - 4 St. S.W.
Calgary Residential Monitoring Unit (CRMU)	39 St. and 29 Ave. N.W.
Calgary Industrial Monitoring Unit (CIMU)	49 Ave. and 15 St. S.E.
Fort Saskatchewan Monitoring Unit (EMMU)	100 Ave. and 98 St.
Fort McMurray Monitoring Unit (FMMU)	Franklin Ave. at old waterpump house site
Fort MacKay Monitoring Unit (FRMU)	100 m west of the Fort MacKay Band Council Administration Office

INDEX OF THE QUALITY OF THE AIR
EDMONTON CENTRAL (DOWNTOWN) 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	92.7	97.8	96.1	100.0	96.1	97.4	98.3	97.3	89.7	85.9	96.9	83.6	94.32
FAIR	7.3	2.2	3.9	0.0	3.9	2.6	1.7	2.7	10.3	13.8	3.1	15.5	5.58
POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.9	0.10
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	5.2	4.0	2.6	0.3	0.0	0.1	0.0	0.0	0.0	0.1	1.4	1.6	1.28
COH	17.5	23.4	19.1	6.1	11.4	4.7	14.8	15.3	46.8	62.9	62.4	67.2	29.30
NO_2	77.0	68.5	53.9	35.1	14.4	20.1	27.0	32.8	32.4	21.6	31.5	26.2	36.71
O_3	0.3	4.0	24.5	58.5	74.2	75.0	58.2	51.9	20.8	15.3	4.7	5.0	32.70

INDEX OF THE QUALITY OF THE AIR
EDMONTON NORTHWEST (RESIDENTIAL) 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	66.4	84.8	83.9	97.1	94.6	92.4	95.7	92.2	87.5	76.7	76.5	74.9	85.23
FAIR	29.4	15.2	15.7	2.9	5.4	7.6	4.3	7.8	11.3	16.0	23.5	22.6	13.48
POOR	4.2	0.0	0.4	0.0	0.0	0.0	0.0	0.0	1.1	7.3	0.0	2.6	1.30
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.01
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	2.2	0.0	1.2	0.8	0.0	0.1	0.5	0.9	2.9	1.1	1.5	0.9	1.01
COH	57.0	62.4	38.7	15.1	9.4	3.3	15.3	15.5	35.0	59.5	62.1	74.7	37.33
NO_2	31.0	20.4	27.0	19.7	19.8	11.9	17.7	19.2	19.3	15.6	24.7	12.6	19.91
O_3	9.8	17.2	33.1	64.3	70.8	84.6	66.4	64.4	42.8	23.8	11.7	11.7	41.72

INDEX OF THE QUALITY OF THE AIR
EDMONTON EAST (INDUSTRIAL) 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	73.9	87.8	89.1	94.7	90.5	92.4	94.4	92.1	86.9	82.5	81.0	80.5	87.15
FAIR	24.6	12.1	10.9	5.3	9.4	7.5	5.6	7.8	11.1	14.9	18.8	17.6	12.13
POOR	1.5	0.1	0.0	0.0	0.1	0.1	0.0	0.1	1.9	2.6	0.3	1.9	0.72
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
COH	51.9	49.0	40.6	14.2	10.8	15.9	38.1	39.2	57.8	66.5	49.3	61.6	41.24
NO_2	31.0	22.0	10.8	10.6	3.4	2.5	2.9	1.7	4.3	4.8	32.4	15.1	11.79
O_3	17.1	29.0	48.7	75.3	85.9	81.7	58.9	59.0	37.9	28.6	18.3	23.4	46.98
SO_2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00

* NO DATA

INDEX OF THE QUALITY OF THE AIR
CALGARY DOWNTOWN 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	94.6	90.2	100.0	99.9	99.5	99.2	100.0	98.5	95.1	99.7	96.0	94.2	97.24
FAIR	5.4	9.8	0.0	0.1	0.5	0.8	0.0	1.5	4.9	0.3	4.0	5.8	2.76
POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	5.2	1.4	0.1	0.6	0.0	0.0	0.0	0.0	0.0	0.8	2.4	6.0	1.38
COH	9.9	23.6	1.1	3.1	0.7	5.4	6.6	32.3	31.8	23.5	18.2	10.6	13.90
NO_2	82.7	75.0	90.2	62.5	57.1	57.8	68.8	38.6	54.6	67.9	77.1	82.9	67.93
O_3	2.2	0.0	8.6	33.9	42.2	36.8	24.6	29.2	13.6	7.8	2.4	0.4	16.81

INDEX OF THE QUALITY OF THE AIR
CALGARY RESIDENTIAL 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	99.3	99.7	99.6	99.2	89.6	92.2	98.8	96.5	100.0	100.0	99.7	99.3	97.83
FAIR	0.7	0.3	0.4	0.8	10.4	7.8	1.2	3.5	0.0	0.0	0.3	0.7	2.18
POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	7.9	6.0	1.3	0.4	0.7	0.0	3.8	0.5	0.6	3.8	4.0	2.3	2.61
COH	0.1	0.0	0.1	0.1	0.0	0.4	2.7	2.0	1.7	2.0	4.6	4.6	1.53
NO_2	57.0	62.1	36.6	15.0	8.6	7.8	15.3	21.6	28.2	46.9	60.7	70.0	35.82
O_3	34.9	31.9	51.9	84.4	90.7	91.8	78.2	75.8	69.6	47.3	30.7	23.1	59.19

INDEX OF THE QUALITY OF THE AIR
CALGARY INDUSTRIAL 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	74.3	80.5	98.5	98.6	95.7	97.3	99.7	99.9	86.4	81.9	80.4	78.9	89.34
FAIR	23.4	19.1	1.5	1.4	4.3	2.7	0.3	0.1	13.1	17.3	19.2	20.0	10.20
POOR	2.3	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.8	0.4	1.1	0.47
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	2.3	1.1	0.0	0.6	0.3	0.0	0.3	0.0	0.0	0.4	1.7	0.4	0.59
COH	63.8	64.4	18.4	23.1	10.5	7.7	18.4	40.1	48.6	55.9	58.6	52.0	38.46
NO_2	26.5	28.7	60.2	20.7	23.4	40.6	34.9	15.1	14.7	27.7	30.1	38.0	30.05
O_3	7.4	5.7	21.4	55.7	65.8	51.7	46.4	44.9	36.7	16.0	9.6	9.5	30.90
SO_2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00

* NO DATA

INDEX OF THE QUALITY OF THE AIR
FORT SASKATCHEWAN 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	94.6	100.0	99.9	100.0	97.6	97.8	100.0	98.1	99.3	99.5	92.1	*	98.08
FAIR	5.4	0.0	0.1	0.0	2.4	2.2	0.0	1.9	0.7	0.5	7.9	*	1.92
POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.00
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	*	0.00
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	0.1	0.0	0.1	0.3	0.0	0.1	0.0	1.5	0.3	0.4	0.0	*	0.25
COH	38.8	18.5	15.3	4.7	0.5	0.6	4.0	4.8	9.2	33.7	45.4	*	15.95
NO_2	23.3	20.1	19.8	4.0	7.4	6.0	8.1	8.6	18.9	6.7	10.4	*	12.12
O_3	37.8	61.4	64.8	91.0	92.1	93.3	87.9	85.1	71.2	59.0	44.2	*	71.62
SO_2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	*	0.02

INDEX OF THE QUALITY OF THE AIR
FORT MCMURRAY 1992
(% OF TIME IN EACH CATEGORY)

IQUA	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
GOOD	100.0	99.4	98.9	98.3	94.6	99.9	*	*	*	99.9	100.0	99.9	98.99
FAIR	0.0	0.6	1.1	1.7	5.4	0.1	*	*	*	0.1	0.0	0.1	1.01
POOR	0.0	0.0	0.0	0.0	0.0	0.0	*	*	*	0.0	0.0	0.0	0.00
VERY POOR	0.0	0.0	0.0	0.0	0.0	0.0	*	*	*	0.0	0.0	0.0	0.00
POLLUTANT	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG
CO	6.0	0.4	0.9	1.3	0.8	2.5	*	*	*	5.8	9.4	9.0	4.01
COH	8.5	4.2	2.6	0.0	0.5	8.9	*	*	*	30.6	21.7	27.6	11.62
NO_2	28.8	33.2	21.2	4.9	6.7	2.4	*	*	*	4.3	2.8	4.8	12.12
O_3	55.8	59.3	70.4	93.9	91.9	86.2	*	*	*	58.9	66.0	58.6	71.22
SO_2	0.9	2.9	4.9	0.0	0.0	0.0	*	*	*	0.3	0.1	0.0	1.01

* NO DATA

```
                         Wind Summary for 1992
                  Edmonton Northwest Monitoring Station

||----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                      ||
||                            Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      129   117   100    51    12     3     0     0     0   412  ||
||    NNE     74   104    83    25     1     0     0     0     0   287  ||
||    NE      95   147    88    30     6     2     0     0     0   368  ||
||    ENE    103   130    45    15     0     0     0     0     0   293  ||
||    E       81   133    98    26     3     0     0     0     0   341  ||
||    ESE     89   191   112    74    13     0     0     0     0   479  ||
||    SE      47   166   201    97    44    33     2     0     0   590  ||
||    SSE     51   123   174   131    46     8     0     0     0   533  ||
||    S      176   377   208    75    17     0     0     0     0   853  ||
||    SSW    169   486   101    14     4     0     0     0     0   774  ||
||    SW     149   347    43     1     0     0     0     0     0   540  ||
||    WSW    114   263    98    17     0     0     0     0     0   492  ||
||    W      110   319   186    49     7     3     0     0     0   674  ||
||    WNW    149   271   260   136    93    24     5     1     0   939  ||
||    NW     126   172   132   131    40     9     8     0     0   618  ||
||    NNW    141   140   149    68    31     7     2     0     0   538  ||
||  TOTAL   1803  3486  2078   940   317    89    17     1     0  8731  ||
||                                                                      ||
||  CALM =     53 hours                                                 ||
||  MISSING DATA =      0 hours                                         ||
||----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                      ||
||                            Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      1.5   1.3   1.1    .6    .1    .0    .0    .0    .0   4.7  ||
||    NNE     .8   1.2    .9    .3    .0    .0    .0    .0    .0   3.3  ||
||    NE     1.1   1.7   1.0    .3    .1    .0    .0    .0    .0   4.2  ||
||    ENE    1.2   1.5    .5    .2    .0    .0    .0    .0    .0   3.3  ||
||    E       .9   1.5   1.1    .3    .0    .0    .0    .0    .0   3.9  ||
||    ESE    1.0   2.2   1.3    .8    .1    .0    .0    .0    .0   5.5  ||
||    SE      .5   1.9   2.3   1.1    .5    .4    .0    .0    .0   6.7  ||
||    SSE     .6   1.4   2.0   1.5    .5    .1    .0    .0    .0   6.1  ||
||    S      2.0   4.3   2.4    .9    .2    .0    .0    .0    .0   9.7  ||
||    SSW    1.9   5.5   1.1    .2    .0    .0    .0    .0    .0   8.8  ||
||    SW     1.7   4.0    .5    .0    .0    .0    .0    .0    .0   6.1  ||
||    WSW    1.3   3.0   1.1    .2    .0    .0    .0    .0    .0   5.6  ||
||    W      1.3   3.6   2.1    .6    .1    .0    .0    .0    .0   7.7  ||
||    WNW    1.7   3.1   3.0   1.5   1.1    .3    .1    .0    .0  10.7  ||
||    NW     1.4   2.0   1.5   1.5    .5    .1    .1    .0    .0   7.0  ||
||    NNW    1.6   1.6   1.7    .8    .4    .1    .0    .0    .0   6.1  ||
||  TOTAL   20.5  39.7  23.7  10.7   3.6   1.0    .2    .0    .0  99.4  ||
||                                                                      ||
||  CALM =    .60%                                                      ||
||  MISSING DATA =    .00%                                              ||
||----------------------------------------------------------------------||
```

Wind Summary for 1992
Edmonton East Monitoring Station

Joint Wind Direction and Speed Frequency Distribution (no. of hours)

Wind Speed (km/h)

Dir	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	>40	TOTAL
N	97	124	108	101	31	7	2	0	0	470
NNE	112	123	91	63	15	1	0	0	0	405
NE	89	98	81	43	10	3	0	0	0	324
ENE	42	36	31	14	2	1	0	0	0	126
E	45	67	60	34	3	2	0	0	0	211
ESE	41	97	128	59	19	0	0	0	0	344
SE	57	163	202	126	54	20	5	0	0	627
SSE	81	146	201	198	125	60	11	2	0	824
S	92	221	256	205	88	61	9	0	0	932
SSW	60	314	619	173	22	6	2	0	0	1196
SW	61	171	153	30	0	2	0	0	0	417
WSW	51	65	63	20	10	2	0	0	0	211
W	48	91	119	65	33	18	1	0	0	375
WNW	85	194	248	208	78	76	18	6	2	915
NW	94	163	103	150	97	48	8	2	5	670
NNW	84	134	116	106	53	23	10	1	1	528
TOTAL	1139	2207	2579	1595	640	330	66	11	8	8575

CALM = 25 hours

MISSING DATA = 184 hours

Joint Wind Direction and Speed Frequency Distribution (percent)

Wind Speed (km/h)

Dir	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	>40	TOTAL
N	1.1	1.4	1.2	1.1	.4	.1	.0	.0	.0	5.4
NNE	1.3	1.4	1.0	.7	.2	.0	.0	.0	.0	4.6
NE	1.0	1.1	.9	.5	.1	.0	.0	.0	.0	3.7
ENE	.5	.4	.4	.2	.0	.0	.0	.0	.0	1.4
E	.5	.8	.7	.4	.0	.0	.0	.0	.0	2.4
ESE	.5	1.1	1.5	.7	.2	.0	.0	.0	.0	3.9
SE	.6	1.9	2.3	1.4	.6	.2	.1	.0	.0	7.1
SSE	.9	1.7	2.3	2.3	1.4	.7	.1	.0	.0	9.4
S	1.0	2.5	2.9	2.3	1.0	.7	.1	.0	.0	10.6
SSW	.7	3.6	7.0	2.0	.3	.1	.0	.0	.0	13.6
SW	.7	1.9	1.7	.3	.0	.0	.0	.0	.0	4.7
WSW	.6	.7	.7	.2	.1	.0	.0	.0	.0	2.4
W	.5	1.0	1.4	.7	.4	.2	.0	.0	.0	4.3
WNW	1.0	2.2	2.8	2.4	.9	.9	.2	.1	.0	10.4
NW	1.1	1.9	1.2	1.7	1.1	.5	.1	.0	.1	7.6
NNW	1.0	1.5	1.3	1.2	.6	.3	.1	.0	.0	6.0
TOTAL	13.0	25.1	29.4	18.2	7.3	3.8	.8	.1	.1	97.6

CALM = .28%

MISSING DATA = 2.09%

```
                      Wind Summary for 1992
             Calgary Residential Monitoring Station

||------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                  ||
||                          Wind Speed (km/h)                       ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||   N      309     7     1     3     2     0     0     0     0   322 ||
||   NNE    192    10     0     0     0     0     0     0     0   202 ||
||   NE     199     8     0     0     0     0     0     0     0   207 ||
||   ENE    212    11     1     0     0     0     0     0     0   224 ||
||   E      305    31     4     0     0     0     0     0     0   340 ||
||   ESE    642    59     3     0     0     0     0     0     0   704 ||
||   SE     776    71     6     3     0     0     0     0     0   856 ||
||   SSE    286    26     3     0     0     0     0     0     0   315 ||
||   S      205    11     8     4     0     1     0     0     0   229 ||
||   SSW    157    11     6     8     3     2     0     1     0   188 ||
||   SW     245    32    19    12     4     4     3     0     0   319 ||
||   WSW    498    67    46    33     9     1     0     0     0   654 ||
||   W     1246   151    47     5     0     0     0     0     0  1449 ||
||   WNW   1403    81    28     1     0     0     0     0     0  1513 ||
||   NW     405    13    11     5     0     0     0     0     0   434 ||
||   NNW    304    15     8     7     6     0     0     0     0   340 ||
||  TOTAL  7384   604   191    81    24     8     3     1     0  8296 ||
||                                                                  ||
||  CALM =    488 hours                                             ||
||  MISSING DATA =     0 hours                                      ||
||------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                  ||
||                          Wind Speed (km/h)                       ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||   N      3.5    .1    .0    .0    .0    .0    .0    .0    .0   3.7 ||
||   NNE    2.2    .1    .0    .0    .0    .0    .0    .0    .0   2.3 ||
||   NE     2.3    .1    .0    .0    .0    .0    .0    .0    .0   2.4 ||
||   ENE    2.4    .1    .0    .0    .0    .0    .0    .0    .0   2.6 ||
||   E      3.5    .4    .0    .0    .0    .0    .0    .0    .0   3.9 ||
||   ESE    7.3    .7    .0    .0    .0    .0    .0    .0    .0   8.0 ||
||   SE     8.8    .8    .1    .0    .0    .0    .0    .0    .0   9.7 ||
||   SSE    3.3    .3    .0    .0    .0    .0    .0    .0    .0   3.6 ||
||   S      2.3    .1    .1    .0    .0    .0    .0    .0    .0   2.6 ||
||   SSW    1.8    .1    .1    .1    .0    .0    .0    .0    .0   2.1 ||
||   SW     2.8    .4    .2    .1    .0    .0    .0    .0    .0   3.6 ||
||   WSW    5.7    .8    .5    .4    .1    .0    .0    .0    .0   7.4 ||
||   W     14.2   1.7    .5    .1    .0    .0    .0    .0    .0  16.5 ||
||   WNW   16.0    .9    .3    .0    .0    .0    .0    .0    .0  17.2 ||
||   NW     4.6    .1    .1    .1    .0    .0    .0    .0    .0   4.9 ||
||   NNW    3.5    .2    .1    .1    .1    .0    .0    .0    .0   3.9 ||
||  TOTAL  84.1   6.9   2.2    .9    .3    .1    .0    .0    .0  94.4 ||
||                                                                  ||
||  CALM =  5.56%                                                   ||
||  MISSING DATA =   .00%                                           ||
||------------------------------------------------------------------||
                        Wind Summary for 1992
                  Calgary Industrial Monitoring Station

||---------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                      ||
||                          Wind Speed (km/h)                           ||
||   Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL  ||
||   N       540    18    16     6     2     4     0     0      0   586  ||
||   NNE     286    20     6     0     0     0     0     0      0   312  ||
||   NE      185     9    10     2     0     0     0     0      0   206  ||
||   ENE     178     2     1     0     0     0     0     0      0   181  ||
||   E       243    28     7     0     0     0     0     0      0   278  ||
||   ESE     356    31     6     0     0     0     0     0      0   393  ||
||   SE      636    41    13     6     0     0     0     0      0   696  ||
||   SSE     651    28     9    16     0     0     0     0      0   704  ||
||   S       565    21    13     4     0     0     0     0      0   603  ||
||   SSW     343    18     2     1     1     1     0     0      0   366  ||
||   SW      322    16     2     2     2     0     0     0      0   344  ||
||   WSW     362    16     6     4     2     0     0     0      0   390  ||
||   W       801    31    14    12     2     0     0     0      0   860  ||
||   WNW     754    59    28    24    22    11     0     0      0   898  ||
||   NW      471    28    28     7     1     0     0     0      0   535  ||
||   NNW     558    10    20    30     3     0     0     0      0   621  ||
|| TOTAL    7251   376   181   114    35    16     0     0      0  7973  ||
||                                                                      ||
|| CALM =    575 hours                                                   ||
|| MISSING DATA =    236 hours                                           ||
||---------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                      ||
||                          Wind Speed (km/h)                           ||
||   Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL  ||
||   N       6.1    .2    .2    .1    .0    .0    .0    .0     .0   6.7  ||
||   NNE     3.3    .2    .1    .0    .0    .0    .0    .0     .0   3.6  ||
||   NE      2.1    .1    .1    .0    .0    .0    .0    .0     .0   2.3  ||
||   ENE     2.0    .0    .0    .0    .0    .0    .0    .0     .0   2.1  ||
||   E       2.8    .3    .1    .0    .0    .0    .0    .0     .0   3.2  ||
||   ESE     4.1    .4    .1    .0    .0    .0    .0    .0     .0   4.5  ||
||   SE      7.2    .5    .1    .1    .0    .0    .0    .0     .0   7.9  ||
||   SSE     7.4    .3    .1    .2    .0    .0    .0    .0     .0   8.0  ||
||   S       6.4    .2    .1    .0    .0    .0    .0    .0     .0   6.9  ||
||   SSW     3.9    .2    .0    .0    .0    .0    .0    .0     .0   4.2  ||
||   SW      3.7    .2    .0    .0    .0    .0    .0    .0     .0   3.9  ||
||   WSW     4.1    .2    .1    .0    .0    .0    .0    .0     .0   4.4  ||
||   W       9.1    .4    .2    .1    .0    .0    .0    .0     .0   9.8  ||
||   WNW     8.6    .7    .3    .3    .3    .1    .0    .0     .0  10.2  ||
||   NW      5.4    .3    .3    .1    .0    .0    .0    .0     .0   6.1  ||
||   NNW     6.4    .1    .2    .3    .0    .0    .0    .0     .0   7.1  ||
|| TOTAL    82.5   4.3   2.1   1.3    .4    .2    .0    .0     .0  90.8  ||
||                                                                      ||
|| CALM =   6.55%                                                        ||
|| MISSING DATA =  2.69%                                                 ||
||---------------------------------------------------------------------||
                         Wind Summary for 1992
                   Springbank Airport Monitoring Station

||-----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours)  ||
||                                                                       ||
||                         Wind Speed (km/h)                             ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL    ||
||   N      323    12     7     4     1     1     1     0     0   349    ||
||   NNE    224    12     6     0     0     1     0     0     0   243    ||
||   NE     198     5    12     2     0     0     0     0     0   217    ||
||   ENE    187     9     7     2     0     0     0     0     0   205    ||
||   E      227    14     9     0     0     0     0     0     0   250    ||
||   ESE    282    18     5     1     0     0     0     0     0   306    ||
||   SE     922    48    53    11    11     0     0     0     0  1045    ||
||   SSE    596    16    15    18     5     0     0     0     0   650    ||
||   S      260    15     3     1     0     0     0     0     0   279    ||
||   SSW    161    11     2     1     0     0     1     0     0   176    ||
||   SW     197    10     9     1     0     2     0     0     0   219    ||
||   WSW    306    10    16     7     8     5     6     4     2   364    ||
||   W      702    26    28    45    36    37    30    10     2   916    ||
||   WNW    677    48    33    25     7     3     0     0     0   793    ||
||   NW    1605   116   101    20     2     0     0     0     0  1844    ||
||   NNW    518    18    25    17    11     1     0     0     0   590    ||
||  TOTAL  7385   388   331   155    81    50    38    14     4  8446    ||
||                                                                       ||
||  CALM =   334 hours                                                   ||
||  MISSING DATA =     4 hours                                           ||
||-----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)     ||
||                                                                       ||
||                         Wind Speed (km/h)                             ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL    ||
||   N      3.7    .1    .1    .0    .0    .0    .0    .0    .0   4.0    ||
||   NNE    2.6    .1    .1    .0    .0    .0    .0    .0    .0   2.8    ||
||   NE     2.3    .1    .1    .0    .0    .0    .0    .0    .0   2.5    ||
||   ENE    2.1    .1    .1    .0    .0    .0    .0    .0    .0   2.3    ||
||   E      2.6    .2    .1    .0    .0    .0    .0    .0    .0   2.8    ||
||   ESE    3.2    .2    .1    .0    .0    .0    .0    .0    .0   3.5    ||
||   SE    10.5    .5    .6    .1    .1    .0    .0    .0    .0  11.9    ||
||   SSE    6.8    .2    .2    .2    .1    .0    .0    .0    .0   7.4    ||
||   S      3.0    .2    .0    .0    .0    .0    .0    .0    .0   3.2    ||
||   SSW    1.8    .1    .0    .0    .0    .0    .0    .0    .0   2.0    ||
||   SW     2.2    .1    .1    .0    .0    .0    .0    .0    .0   2.5    ||
||   WSW    3.5    .1    .2    .1    .1    .1    .1    .0    .0   4.1    ||
||   W      8.0    .3    .3    .5    .4    .4    .3    .1    .0  10.4    ||
||   WNW    7.7    .5    .4    .3    .1    .0    .0    .0    .0   9.0    ||
||   NW    18.3   1.3   1.1    .2    .0    .0    .0    .0    .0  21.0    ||
||   NNW    5.9    .2    .3    .2    .1    .0    .0    .0    .0   6.7    ||
||  TOTAL  84.1   4.4   3.8   1.8    .9    .6    .4    .2    .0  96.2    ||
||                                                                       ||
||  CALM =  3.80%                                                        ||
||  MISSING DATA =   .05%                                                ||
||-----------------------------------------------------------------------||
```

Wind Summary for 1992
Fort Saskatchewan Monitoring Station

Joint Wind Direction and Speed Frequency Distribution (no. of hours)

Wind Speed (km/h)

Dir	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	>40	TOTAL
N	140	119	70	34	5	3	0	0	0	371
NNE	157	119	31	5	0	0	0	0	0	312
NE	179	78	22	3	0	0	0	0	0	282
ENE	111	74	40	7	0	0	0	0	0	232
E	120	188	85	5	0	0	0	0	0	398
ESE	116	218	77	23	3	0	0	0	0	437
SE	117	179	154	73	60	18	4	0	0	605
SSE	108	135	110	66	31	14	0	0	0	464
S	151	175	78	47	12	5	0	0	0	468
SSW	209	310	79	20	13	2	1	0	0	634
SW	317	352	133	41	2	0	0	0	0	845
WSW	185	189	76	24	1	0	0	0	0	475
W	97	132	142	45	14	4	0	0	0	434
WNW	72	100	168	132	46	33	6	2	0	559
NW	82	108	140	157	119	77	28	9	7	727
NNW	97	96	115	104	88	48	12	4	1	565
TOTAL	2258	2572	1520	786	394	204	51	15	8	7808

CALM = 52 hours

MISSING DATA = 924 hours

Joint Wind Direction and Speed Frequency Distribution (percent)

Wind Speed (km/h)

Dir	0-5	5-10	10-15	15-20	20-25	25-30	30-35	35-40	>40	TOTAL
N	1.6	1.4	.8	.4	.1	.0	.0	.0	.0	4.2
NNE	1.8	1.4	.4	.1	.0	.0	.0	.0	.0	3.6
NE	2.0	.9	.3	.0	.0	.0	.0	.0	.0	3.2
ENE	1.3	.8	.5	.1	.0	.0	.0	.0	.0	2.6
E	1.4	2.1	1.0	.1	.0	.0	.0	.0	.0	4.5
ESE	1.3	2.5	.9	.3	.0	.0	.0	.0	.0	5.0
SE	1.3	2.0	1.8	.8	.7	.2	.0	.0	.0	6.9
SSE	1.2	1.5	1.3	.8	.4	.2	.0	.0	.0	5.3
S	1.7	2.0	.9	.5	.1	.1	.0	.0	.0	5.3
SSW	2.4	3.5	.9	.2	.1	.0	.0	.0	.0	7.2
SW	3.6	4.0	1.5	.5	.0	.0	.0	.0	.0	9.
WSW	2.1	2.2	.9	.3	.0	.0	.0	.0	.0	5.4
W	1.1	1.5	1.6	.5	.2	.0	.0	.0	.0	4.9
WNW	.8	1.1	1.9	1.5	.5	.4	.1	.0	.0	6.
NW	.9	1.2	1.6	1.8	1.4	.9	.3	.1	.1	8.3
NNW	1.1	1.1	1.3	1.2	1.0	.5	.1	.0	.0	6.4
TOTAL	25.7	29.3	17.3	8.9	4.5	2.3	.6	.2	.1	88

CALM = .59%

MISSING DATA = 10.52%

```
                      Wind Summary for 1992
           Fort McMurray Monitoring Station (FMMU)

||-----------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                 ||
||                          Wind Speed (km/h)                      ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40  >40 TOTAL ||
||   N      128   120    45    11     3     5     0     0    0   312 ||
||   NNE     97   137   124    44    10     3     0     0    0   415 ||
||   NE      35    12     6     2     0     0     0     0    0    55 ||
||   ENE     17     4     1     0     0     0     0     0    0    22 ||
||   E       33    13     0     0     0     0     0     0    0    46 ||
||   ESE     34     3     0     0     0     0     0     0    0    37 ||
||   SE     234   148    12     8     1     0     0     0    0   403 ||
||   SSE    554   297    42     7     2     3     0     0    0   905 ||
||   S      159    64    15     4     1     0     0     0    0   243 ||
||   SSW     45     7     1     1     0     0     0     0    0    54 ||
||   SW     116    21     0     0     0     0     0     0    0   137 ||
||   WSW    131    31    10     2     0     0     0     0    0   174 ||
||   W      112    77    35     8     0     0     0     0    0   232 ||
||   WNW     73    42    34     8     0     0     0     0    0   157 ||
||   NW      83    51    15    16    10     2     1     1    0   179 ||
||   NNW     93    39     8     7     9     3     1     2    0   162 ||
|| TOTAL   1944  1066   348   118    36    16     2     3    0  3533 ||
||                                                                 ||
|| CALM =  1020 hours                                              ||
|| MISSING DATA =  4231 hours                                      ||
||-----------------------------------------------------------------||
||  Joint Wind Direction and Speed Frequency Distribution (percent)   ||
||                                                                 ||
||                          Wind Speed (km/h)                      ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40  >40 TOTAL ||
||   N      1.5   1.4    .5    .1    .0    .1    .0    .0   .0   3.6 ||
||   NNE    1.1   1.6   1.4    .5    .1    .0    .0    .0   .0   4.7 ||
||   NE      .4    .1    .1    .0    .0    .0    .0    .0   .0    .6 ||
||   ENE     .2    .0    .0    .0    .0    .0    .0    .0   .0    .3 ||
||   E       .4    .1    .0    .0    .0    .0    .0    .0   .0    .5 ||
||   ESE     .4    .0    .0    .0    .0    .0    .0    .0   .0    .4 ||
||   SE     2.7   1.7    .1    .1    .0    .0    .0    .0   .0   4.6 ||
||   SSE    6.3   3.4    .5    .1    .0    .0    .0    .0   .0  10.3 ||
||   S      1.8    .7    .2    .0    .0    .0    .0    .0   .0   2.8 ||
||   SSW     .5    .1    .0    .0    .0    .0    .0    .0   .0    .6 ||
||   SW     1.3    .2    .0    .0    .0    .0    .0    .0   .0   1.6 ||
||   WSW    1.5    .4    .1    .0    .0    .0    .0    .0   .0   2.0 ||
||   W      1.3    .9    .4    .1    .0    .0    .0    .0   .0   2.6 ||
||   WNW     .8    .5    .4    .1    .0    .0    .0    .0   .0   1.8 ||
||   NW      .9    .6    .2    .2    .1    .0    .0    .0   .0   2.0 ||
||   NNW    1.1    .4    .1    .1    .1    .0    .0    .0   .0   1.8 ||
|| TOTAL   22.1  12.1   4.0   1.3    .4    .2    .0    .0   .0  40.2 ||
||                                                                 ||
|| CALM = 11.61%                                                   ||
|| MISSING DATA = 48.17%                                           ||
||-----------------------------------------------------------------||
                           Wind Summary for 1992
                       Fort MacKay Monitoring Station

||------------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours)  ||
||                                                                        ||
||                              Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL  ||
||    N      360   326   280    59     1     0     0     0      0  1026  ||
||    NNE    164   306   248    32     1     0     0     0      0   751  ||
||    NE     181   110    85    15     0     0     0     0      0   391  ||
||    ENE    122    80    37     7     0     0     0     0      0   246  ||
||    E      187   104    17     1     0     0     0     0      0   309  ||
||    ESE    205   409    71     1     0     0     0     0      0   686  ||
||    SE     201   168    27     8     0     1     0     0      0   405  ||
||    SSE    139   247   133    51    15     2     0     0      0   587  ||
||    S      218   245   105    14     0     0     0     0      0   582  ||
||    SSW    259   280   108    13     0     0     0     0      0   660  ||
||    SW     241   149    75    13     0     0     0     0      0   478  ||
||    WSW    131   126    84    24     0     0     0     0      0   365  ||
||    W      176   132    67     7     0     0     0     0      0   382  ||
||    WNW    166   127    55     5     0     0     0     0      0   353  ||
||    NW     177   156    87    29     1     0     0     0      0   450  ||
||    NNW    195   171   127    22     0     0     0     0      0   515  ||
||  TOTAL   3122  3136  1606   301    18     3     0     0      0  8186  ||
||                                                                        ||
||  CALM =    477 hours                                                   ||
||  MISSING DATA =   121 hours                                            ||
||------------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)     ||
||                                                                        ||
||                              Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL  ||
||    N      4.1   3.7   3.2    .7    .0    .0    .0    .0     .0  11.7  ||
||    NNE    1.9   3.5   2.8    .4    .0    .0    .0    .0     .0   8.5  ||
||    NE     2.1   1.3   1.0    .2    .0    .0    .0    .0     .0   4.5  ||
||    ENE    1.4    .9    .4    .1    .0    .0    .0    .0     .0   2.8  ||
||    E      2.1   1.2    .2    .0    .0    .0    .0    .0     .0   3.5  ||
||    ESE    2.3   4.7    .8    .0    .0    .0    .0    .0     .0   7.8  ||
||    SE     2.3   1.9    .3    .1    .0    .0    .0    .0     .0   4.6  ||
||    SSE    1.6   2.8   1.5    .6    .2    .0    .0    .0     .0   6.7  ||
||    S      2.5   2.8   1.2    .2    .0    .0    .0    .0     .0   6.6  ||
||    SSW    2.9   3.2   1.2    .1    .0    .0    .0    .0     .0   7.5  ||
||    SW     2.7   1.7    .9    .1    .0    .0    .0    .0     .0   5.4  ||
||    WSW    1.5   1.4   1.0    .3    .0    .0    .0    .0     .0   4.2  ||
||    W      2.0   1.5    .8    .1    .0    .0    .0    .0     .0   4.3  ||
||    WNW    1.9   1.4    .6    .1    .0    .0    .0    .0     .0   4.0  ||
||    NW     2.0   1.8   1.0    .3    .0    .0    .0    .0     .0   5.1  ||
||    NNW    2.2   1.9   1.4    .3    .0    .0    .0    .0     .0   5.9  ||
||  TOTAL   35.5  35.7  18.3   3.4    .2    .0    .0    .0     .0  93.2  ||
||                                                                        ||
||  CALM =  5.43%                                                         ||
||  MISSING DATA =  1.38%                                                 ||
||------------------------------------------------------------------------||
```

```
                          NH3 Summary Statistics for 1992
                          Fort Saskatchewan Monitoring Station
                          Units are PPM (parts per million)
||--------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =  2.0 PPM                                   ||
||-----------------------------------BY SEASON------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter     .0      .0      .0      .0      .0      .0      .0      .0      .0      .1      .1 ||
|| Spring     .0      .0      .0      .0      .0      .0      .0      .1      .1      .2      .7 ||
|| Summer    *       *       *       *       *       *       *       *       *       *       *   ||
|| Autumn    *       *       *       *       *       *       *       *       *       *       *   ||
||                                                                                ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||           Mean      Mean     Std Dev                    1 hour                 ||
|| Winter     .00       .00        .01        .1   463     0(0.00%)               ||
|| Spring     .02       .00        .05        .7   417     0(0.00%)               ||
|| Summer     *         *          *          *    *                *             ||
|| Autumn     *         *          *          *    *                *             ||
||-----------------------------------BY MONTH-------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan       *       *       *       *       *       *       *       *       *       *       *   ||
|| Feb        .0      .0      .0      .0      .0      .0      .0      .0      .0      .1      .1 ||
|| Mar        .0      .0      .0      .0      .0      .0      .0      .1      .1      .2      .7 ||
|| Apr       *       *       *       *       *       *       *       *       *       *       *   ||
|| May       *       *       *       *       *       *       *       *       *       *       *   ||
|| Jun       *       *       *       *       *       *       *       *       *       *       *   ||
|| Jul       *       *       *       *       *       *       *       *       *       *       *   ||
|| Aug       *       *       *       *       *       *       *       *       *       *       *   ||
|| Sep       *       *       *       *       *       *       *       *       *       *       *   ||
|| Oct       *       *       *       *       *       *       *       *       *       *       *   ||
|| Nov       *       *       *       *       *       *       *       *       *       *       *   ||
|| Dec       *       *       *       *       *       *       *       *       *       *       *   ||
||                                                                                ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||           Mean      Mean     Std Dev                    1 hour                 ||
|| Jan        *         *          *          *    *                *             ||
|| Feb        .00       .00        .01        .1   463     0(0.00%)               ||
|| Mar        .02       .00        .05        .7   417     0(0.00%)               ||
|| Apr        *         *          *          *    *                *             ||
|| May        *         *          *          *    *                *             ||
|| Jun        *         *          *          *    *                *             ||
|| Jul        *         *          *          *    *                *             ||
|| Aug        *         *          *          *    *                *             ||
|| Sep        *         *          *          *    *                *             ||
|| Oct        *         *          *          *    *                *             ||
|| Nov        *         *          *          *    *                *             ||
|| Dec        *         *          *          *    *                *             ||
||-----------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992       .0      .0      .0      .0      .0      .0      .0      .0      .1      .1      .7 ||
||                                                                                ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||           Mean      Mean     Std Dev                    1 hour                 ||
|| 1992       .01       .00        .04        .7   880     0(0.00%)               ||
||--------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

Annual Average Concentration
Year: 1992
Pollutant: NH3 [ppm]

Year	Fort Saskatchewan
1976	*
1977	*
1978	*
1979	*
1980	*
1981	0.00
1982	0.00
1983	0.00
1984	0.03
1985	0.01
1986	0.03
1987	0.01
1988	0.02
1989	0.00a
1990	0.01
1991	0.01
1992	b

a 50% to 75% of data available
b less than 50% of data available

```
                         CO  Summary Statistics for 1992
                         Edmonton Central Monitoring Station
                         Units are PPM (parts per million)
||------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                       ||
|| Ambient 8-hour average regulation =  5.0 PPM                                       ||
||-----------------------------------BY SEASON----------------------------------------||
|| SEASON   MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter    .2      .3      .4      .5      .8     1.3     2.0     3.2     4.2     6.7    12.5 ||
|| Spring    .0      .3      .4      .5      .6      .9     1.3     1.8     2.2     3.9     7.5 ||
|| Summer    .0      .1      .2      .3      .4      .7     1.0     1.2     1.4     1.9     3.4 ||
|| Autumn    .0      .1      .2      .3      .5      .9     1.4     2.3     3.1     5.2    13.5 ||
||                                                                                    ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||          Mean       Mean     Std Dev                   1 hour        8 hour        ||
|| Winter   1.65       1.29       1.30     12.3  2159     0(0.00%)      4(1.49%)      ||
|| Spring   1.07        .90        .68      7.5  2201     0(0.00%)      0(0.00%)      ||
|| Summer    .73        .62        .40      3.4  2120     0(0.00%)      0(0.00%)      ||
|| Autumn   1.16        .80       1.07     13.5  2177     1(0.05%)      2(0.74%)      ||
||-----------------------------------BY MONTH-----------------------------------------||
|| MONTH    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan       .4      .4      .5      .5      .8     1.3     2.2     3.4     4.2     7.7    12.5 ||
|| Feb       .3      .3      .5      .6      .8     1.3     2.1     3.0     3.8     6.3    12.2 ||
|| Mar       .0      .3      .4      .5      .8     1.1     1.7     2.4     3.2     5.1     7.5 ||
|| Apr       .3      .4      .4      .5      .6      .9     1.2     1.6     1.9     2.7     5.8 ||
|| May       .1      .3      .4      .4      .6      .8     1.1     1.4     1.5     2.0     2.8 ||
|| Jun       .1      .2      .3      .4      .5      .7     1.0     1.2     1.4     1.8     2.0 ||
|| Jul       .1      .1      .2      .3      .5      .7     1.0     1.2     1.5     2.1     3.4 ||
|| Aug       .0      .1      .2      .2      .3      .6     1.0     1.2     1.4     2.1     2.9 ||
|| Sep       .0      .1      .2      .2      .4      .7     1.2     2.1     2.8     4.8    13.5 ||
|| Oct       .0      .2      .3      .3      .5      .9     1.4     2.3     3.2     5.9    11.2 ||
|| Nov       .0      .2      .3      .4      .6     1.1     1.7     2.5     3.3     5.3    11.4 ||
|| Dec       .2      .3      .4      .5      .7     1.3     2.0     3.0     4.2     6.1     7.8 ||
||                                                                                    ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||          Mean       Mean     Std Dev                   1 hour        8 hour        ||
|| Jan      1.74       1.36       1.44     12.1   740     0(0.00%)      2(2.17%)      ||
|| Feb      1.64       1.33       1.22     11.9   696     0(0.00%)      1(1.15%)      ||
|| Mar      1.36       1.04        .93      7.5   742     0(0.00%)      0(0.00%)      ||
|| Apr       .99        .89        .51      5.5   715     0(0.00%)      0(0.00%)      ||
|| May       .86        .79        .36      2.7   744     0(0.00%)      0(0.00%)      ||
|| Jun       .76        .69        .34      1.9   638     0(0.00%)      0(0.00%)      ||
|| Jul       .75        .63        .40      3.3   741     0(0.00%)      0(0.00%)      ||
|| Aug       .69        .55        .43      2.9   741     0(0.00%)      0(0.00%)      ||
|| Sep      1.00        .62       1.04     13.5   717     1(0.14%)      1(1.12%)      ||
|| Oct      1.17        .85       1.10     11.2   742     0(0.00%)      1(1.09%)      ||
|| Nov      1.31        .95       1.06     11.4   718     0(0.00%)      0(0.00%)      ||
|| Dec      1.55       1.19       1.22      7.6   723     0(0.00%)      1(1.12%)      ||
||-----------------------------------BY YEAR------------------------------------------||
|| YEAR     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992      .0      .1      .3      .4      .6      .9     1.4     2.2     2.9     5.2    13.5 ||
||                                                                                    ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||          Mean       Mean     Std Dev                   1 hour        8 hour        ||
|| 1992     1.15        .87        .99     13.5  8657     1(0.01%)      6(0.56%)      ||
||------------------------------------------------------------------------------------||
   n/a - not applicable           * - no data
```

```
                                  CO  Summary Statistics for 1992
                                  Edmonton Northwest Monitoring Station
                                  Units are PPM (parts per million)
||---------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                    ||
|| Ambient 8-hour average regulation =  5.0 PPM                                    ||
||------------------------------------BY SEASON------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%      MAX ||
|| Winter     .1     .3      .4      .5      .6     1.1     2.0     3.3     4.7     8.0     14.0 ||
|| Spring     .1     .3      .3      .4      .5      .6      .9     1.6     2.3     4.3      9.1 ||
|| Summer     .2     .3      .3      .3      .4      .5      .7     1.0     1.3     2.1      4.9 ||
|| Autumn     .2     .3      .3      .4      .5      .7     1.3     2.7     3.7     8.9     18.1 ||
||                                                                                 ||
|| SEASON Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances   ||
||          Mean       Mean     Std Dev                     1 hour       8 hour    ||
|| Winter   1.59       1.15       1.54      13.9  2180     2(0.09%)     9(3.32%)   ||
|| Spring    .86        .69        .80       9.0  2199     0(0.00%)     0(0.00%)   ||
|| Summer    .64        .57        .37       4.7  2204     0(0.00%)     0(0.00%)   ||
|| Autumn   1.23        .85       1.54      17.9  2180     7(0.32%)     6(2.21%)   ||
||------------------------------------BY MONTH-------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%      MAX ||
|| Jan        .1     .2      .3      .4      .7     1.2     2.6     4.3     5.4     9.7     14.0 ||
|| Feb        .3     .3      .3      .4      .6      .9     1.7     2.8     3.8     6.3     10.0 ||
|| Mar        .1     .3      .3      .4      .6      .8     1.4     2.5     3.2     6.7      9.1 ||
|| Apr        .3     .3      .3      .4      .4      .6      .8     1.1     1.8     3.1      4.5 ||
|| May        .3     .3      .3      .4      .4      .6      .7     1.0     1.4     2.4      3.6 ||
|| Jun        .3     .3      .3      .3      .4      .5      .7      .9     1.0     1.4      1.7 ||
|| Jul        .3     .3      .3      .4      .4      .6      .7     1.1     1.3     2.1      2.8 ||
|| Aug        .2     .3      .3      .3      .4      .5      .8     1.2     1.6     2.5      4.9 ||
|| Sep        .2     .3      .3      .3      .5      .7     1.1     2.4     3.0     8.7     18.1 ||
|| Oct        .2     .2      .3      .3      .4      .7     1.2     2.4     3.6    11.2     15.8 ||
|| Nov        .3     .3      .3      .4      .6      .9     1.8     3.1     4.0     5.8     11.0 ||
|| Dec        .4     .4      .5      .5      .7     1.1     1.8     2.9     4.1     8.2     11.2 ||
||                                                                                 ||
|| MONTH  Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances   ||
||          Mean       Mean     Std Dev                     1 hour       8 hour    ||
|| Jan      1.90       1.29       1.86      13.9   742     2(0.27%)     5(5.43%)   ||
|| Feb      1.36       1.01       1.26       9.7   696     0(0.00%)     1(1.15%)   ||
|| Mar      1.20        .90       1.16       9.0   742     0(0.00%)     0(0.00%)   ||
|| Apr       .72        .62        .51       4.2   715     0(0.00%)     0(0.00%)   ||
|| May       .66        .59        .38       3.3   742     0(0.00%)     0(0.00%)   ||
|| Jun       .58        .54        .24       1.4   720     0(0.00%)     0(0.00%)   ||
|| Jul       .64        .58        .33       2.5   742     0(0.00%)     0(0.00%)   ||
|| Aug       .69        .59        .48       4.7   742     0(0.00%)     0(0.00%)   ||
|| Sep      1.10        .77       1.49      17.9   720     3(0.42%)     1(1.11%)   ||
|| Oct      1.22        .79       1.81      15.6   742     4(0.54%)     3(3.26%)   ||
|| Nov      1.37       1.00       1.26      10.7   718     0(0.00%)     2(2.25%)   ||
|| Dec      1.51       1.17       1.39      10.8   742     0(0.00%)     3(3.26%)   ||
||-------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%      MAX ||
|| 1992       .1     .3      .3      .4      .5      .7     1.1     2.3     3.2     6.1     18.1 ||
||                                                                                 ||
|| YEAR   Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances   ||
||          Mean       Mean     Std Dev                     1 hour       8 hour    ||
|| 1992     1.08        .79       1.23      18.0  8763     9(0.10%)    15(1.38%)   ||
||---------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                              Wind Summary for 1992
                      Edmonton Northwest Monitoring Station
   ** calculation is for exceedances of the 1-hour regulation for CO  **
||----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                      ||
||                            Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N        0     0     0     0     0     0     0     0     0     0  ||
||    NNE      0     0     0     0     0     0     0     0     0     0  ||
||    NE       0     0     0     0     0     0     0     0     0     0  ||
||    ENE      0     0     0     0     0     0     0     0     0     0  ||
||    E        0     0     0     0     0     0     0     0     0     0  ||
||    ESE      0     0     0     0     0     0     0     0     0     0  ||
||    SE       0     0     0     0     0     0     0     0     0     0  ||
||    SSE      1     0     0     0     0     0     0     0     0     1  ||
||    S        5     1     0     0     0     0     0     0     0     6  ||
||    SSW      0     1     0     0     0     0     0     0     0     1  ||
||    SW       0     0     0     0     0     0     0     0     0     0  ||
||    WSW      0     0     0     0     0     0     0     0     0     0  ||
||    W        0     0     0     0     0     0     0     0     0     0  ||
||    WNW      0     0     0     0     0     0     0     0     0     0  ||
||    NW       0     0     0     0     0     0     0     0     0     0  ||
||    NNW      1     0     0     0     0     0     0     0     0     1  ||
||  TOTAL      7     2     0     0     0     0     0     0     0     9  ||
||                                                                      ||
||  CALM =      0 hours                                                 ||
||  MISSING DATA =     0 hours                                          ||
||----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                      ||
||                            Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ENE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    E       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ESE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SSE   11.1    .0    .0    .0    .0    .0    .0    .0    .0  11.1  ||
||    S     55.6  11.1    .0    .0    .0    .0    .0    .0    .0  66.7  ||
||    SSW     .0  11.1    .0    .0    .0    .0    .0    .0    .0  11.1  ||
||    SW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    WSW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    W       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    WNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNW   11.1    .0    .0    .0    .0    .0    .0    .0    .0  11.1  ||
||  TOTAL   77.8  22.2    .0    .0    .0    .0    .0    .0    .0 100.0  ||
||                                                                      ||
||  CALM =   .00%                                                       ||
||  MISSING DATA =   .00%                                               ||
||----------------------------------------------------------------------||
                         Wind Summary for 1992
                   Edmonton Northwest Monitoring Station
  ** calculation is for exceedances of the 8-hour regulation for CO  **
||-----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                       ||
||                         Wind Speed (km/h)                             ||
||    Dir    0-5   5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N        0      0     0     0     0     0     0     0     0     0  ||
||    NNE      2      0     0     0     0     0     0     0     0     2  ||
||    NE       1      0     0     0     0     0     0     0     0     1  ||
||    ENE      1      0     0     0     0     0     0     0     0     1  ||
||    E        3      0     0     0     0     0     0     0     0     3  ||
||    ESE      2      0     0     0     0     0     0     0     0     2  ||
||    SE       0      0     0     0     0     0     0     0     0     0  ||
||    SSE      2      0     0     0     0     0     0     0     0     2  ||
||    S       17     13     0     0     0     0     0     0     0    30  ||
||    SSW     10     25     0     0     0     0     0     0     0    35  ||
||    SW       9     11     1     0     0     0     0     0     0    21  ||
||    WSW      5      1     0     0     0     0     0     0     0     6  ||
||    W        2      0     0     0     0     0     0     0     0     2  ||
||    WNW      4      1     0     0     0     0     0     0     0     5  ||
||    NW       2      1     0     0     0     0     0     0     0     3  ||
||    NNW      2      1     0     0     0     0     0     0     0     3  ||
||  TOTAL     62     53     1     0     0     0     0     0     0   116  ||
||                                                                       ||
||  CALM =      4 hours                                                  ||
||  MISSING DATA =     0 hours                                           ||
||-----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)     ||
||                                                                       ||
||                         Wind Speed (km/h)                             ||
||    Dir    0-5   5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N       .0     .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNE    1.7     .0    .0    .0    .0    .0    .0    .0    .0   1.7  ||
||    NE      .8     .0    .0    .0    .0    .0    .0    .0    .0    .8  ||
||    ENE     .8     .0    .0    .0    .0    .0    .0    .0    .0    .8  ||
||    E      2.5     .0    .0    .0    .0    .0    .0    .0    .0   2.5  ||
||    ESE    1.7     .0    .0    .0    .0    .0    .0    .0    .0   1.7  ||
||    SE      .0     .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SSE    1.7     .0    .0    .0    .0    .0    .0    .0    .0   1.7  ||
||    S     14.2   10.8    .0    .0    .0    .0    .0    .0    .0  25.0  ||
||    SSW    8.3   20.8    .0    .0    .0    .0    .0    .0    .0  29.2  ||
||    SW     7.5    9.2    .8    .0    .0    .0    .0    .0    .0  17.5  ||
||    WSW    4.2     .8    .0    .0    .0    .0    .0    .0    .0   5.0  ||
||    W      1.7     .0    .0    .0    .0    .0    .0    .0    .0   1.7  ||
||    WNW    3.3     .8    .0    .0    .0    .0    .0    .0    .0   4.2  ||
||    NW     1.7     .8    .0    .0    .0    .0    .0    .0    .0   2.5  ||
||    NNW    1.7     .8    .0    .0    .0    .0    .0    .0    .0   2.5  ||
||  TOTAL   51.7   44.2    .8    .0    .0    .0    .0    .0    .0  96.7  ||
||                                                                       ||
||  CALM =  3.33%                                                        ||
||  MISSING DATA =   .00%                                                ||
||-----------------------------------------------------------------------||
                         CO  Summary Statistics for 1992
                         Edmonton East Monitoring Station
                         Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                        ||
|| Ambient 8-hour average regulation =  5.0 PPM                                        ||
||-------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter     .0      .0      .2      .3      .3      .5      .8     1.4     1.8     2.7     4.4 ||
|| Spring     .0      .1      .2      .3      .3      .4      .5      .7     1.0     1.8     4.0 ||
|| Summer     .0      .1      .2      .2      .3      .4      .5      .6      .8     1.2     1.7 ||
|| Autumn     .0      .0      .2      .2      .3      .4      .6     1.0     1.5     2.4     3.8 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                   1 hour       8 hour          ||
|| Winter     .67       .34        .54      4.4  2136     0(0.00%)     0(0.00%)        ||
|| Spring     .46       .36        .32      4.0  2192     0(0.00%)     0(0.00%)        ||
|| Summer     .42       .33        .20      1.7  2011     0(0.00%)     0(0.00%)        ||
|| Autumn     .56       .34        .44      3.8  2024     0(0.00%)     0(0.00%)        ||
||-------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan        .2      .2      .3      .3      .4      .5      .9     1.5     1.9     3.2     4.4 ||
|| Feb        .2      .3      .3      .3      .4      .5      .8     1.4     1.7     2.5     3.5 ||
|| Mar        .2      .2      .3      .3      .3      .4      .6     1.1     1.6     2.4     4.0 ||
|| Apr        .0      .0      .2      .2      .3      .3      .4      .6      .9     1.4     1.8 ||
|| May        .0      .1      .3      .3      .3      .3      .4      .6      .8     1.1     1.8 ||
|| Jun        .0      .2      .2      .2      .3      .3      .4      .5      .7     1.0     1.1 ||
|| Jul        .2      .2      .3      .3      .3      .4      .5      .7      .9     1.3     1.7 ||
|| Aug        .0      .0      .2      .2      .3      .4      .5      .7      .9     1.3     1.5 ||
|| Sep        .1      .2      .2      .3      .3      .4      .6      .9     1.0     2.0     2.8 ||
|| Oct        .1      .2      .2      .3      .3      .4      .7     1.2     1.8     3.0     3.8 ||
|| Nov        .0      .0      .0      .2      .3      .4      .7     1.2     1.6     2.3     3.2 ||
|| Dec        .0      .0      .0      .1      .3      .4      .8     1.2     1.6     2.5     3.9 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                   1 hour       8 hour          ||
|| Jan        .75       .60        .60      4.2   720     0(0.00%)     0(0.00%)        ||
|| Feb        .69       .58        .49      3.3   693     0(0.00%)     0(0.00%)        ||
|| Mar        .58       .48        .45      3.8   735     0(0.00%)     0(0.00%)        ||
|| Apr        .40       .29        .23      1.8   716     0(0.00%)     0(0.00%)        ||
|| May        .39       .33        .17      1.8   741     0(0.00%)     0(0.00%)        ||
|| Jun        .38       .32        .15      1.1   681     0(0.00%)     0(0.00%)        ||
|| Jul        .45       .42        .20      1.5   610     0(0.00%)     0(0.00%)        ||
|| Aug        .43       .28        .23      1.5   720     0(0.00%)     0(0.00%)        ||
|| Sep        .51       .45        .32      2.7   715     0(0.00%)     0(0.00%)        ||
|| Oct        .61       .49        .52      3.7   662     0(0.00%)     0(0.00%)        ||
|| Nov        .57       .31        .46      3.2   647     0(0.00%)     0(0.00%)        ||
|| Dec        .58       .24        .52      3.9   723     0(0.00%)     0(0.00%)        ||
||--------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992       .0      .0      .2      .3      .3      .4      .6     1.0     1.3     2.3     4.4 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                   1 hour       8 hour          ||
|| 1992       .53       .34        .41      4.4  8363     0(0.00%)     0(0.00%)        ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                         CO  Summary Statistics for 1992
                         Calgary Downtown Monitoring Station
                         Units are PPM (parts per million)
||------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                       ||
|| Ambient 8-hour average regulation =  5.0 PPM                                       ||
||-------------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter     .2     .3      .4      .4      .7     1.2     2.0     3.5     4.9     8.8    20.2 ||
|| Spring     .2     .3      .3      .4      .5      .8     1.2     1.8     2.3     3.9     8.3 ||
|| Summer     .2     .3      .3      .4      .5      .8     1.1     1.5     1.8     2.6     6.6 ||
|| Autumn     .2     .3      .3      .4      .6      .9     1.5     2.5     3.4     5.9     9.3 ||
||                                                                                    ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                  1 hour        8 hour        ||
|| Winter    1.69       1.22       1.67     20.0  2173     3(0.14%)      8(2.97%)      ||
|| Spring     .98        .81        .73      8.1  2189     0(0.00%)      0(0.00%)      ||
|| Summer     .87        .76        .50      6.4  2198     0(0.00%)      0(0.00%)      ||
|| Autumn    1.27        .97       1.09      9.1  2177     0(0.00%)      1(0.37%)      ||
||-------------------------------------BY MONTH---------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan        .3     .3      .3      .4      .7     1.2     2.1     3.8     5.2     9.8    15.0 ||
|| Feb        .2     .3      .4      .5      .8     1.3     2.0     3.1     4.4     7.4     9.2 ||
|| Mar        .3     .3      .4      .4      .6      .9     1.5     2.3     3.0     4.7     8.3 ||
|| Apr        .2     .3      .3      .4      .5      .8     1.2     1.7     2.1     3.5     7.0 ||
|| May        .2     .3      .3      .4      .5      .7     1.0     1.4     1.7     2.5     3.9 ||
|| Jun        .2     .3      .3      .4      .5      .8     1.1     1.5     1.8     2.9     3.5 ||
|| Jul        .3     .3      .4      .4      .5      .8     1.1     1.4     1.6     2.3     3.1 ||
|| Aug        .2     .2      .3      .3      .5      .7     1.1     1.5     1.8     2.7     6.6 ||
|| Sep        .2     .2      .3      .4      .5      .8     1.2     2.2     3.2     5.9     8.5 ||
|| Oct        .2     .3      .3      .4      .6     1.0     1.5     2.5     3.1     4.8     7.5 ||
|| Nov        .2     .3      .3      .4      .6     1.1     1.8     2.9     3.7     7.1     9.3 ||
|| Dec        .2     .3      .4      .4      .6     1.1     1.8     3.6     4.8     9.6    20.2 ||
||                                                                                    ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                  1 hour        8 hour        ||
|| Jan       1.78       1.26       1.82     14.7   741     1(0.13%)      4(4.35%)      ||
|| Feb       1.64       1.27       1.33      9.0   693     0(0.00%)      0(0.00%)      ||
|| Mar       1.18        .95        .90      8.0   733     0(0.00%)      0(0.00%)      ||
|| Apr        .95        .79        .70      6.8   717     0(0.00%)      0(0.00%)      ||
|| May        .81        .70        .46      3.7   739     0(0.00%)      0(0.00%)      ||
|| Jun        .90        .78        .51      3.3   717     0(0.00%)      0(0.00%)      ||
|| Jul        .87        .78        .42      2.8   739     0(0.00%)      0(0.00%)      ||
|| Aug        .85        .72        .55      6.4   742     0(0.00%)      0(0.00%)      ||
|| Sep       1.11        .85       1.03      8.3   718     0(0.00%)      0(0.00%)      ||
|| Oct       1.24        .97        .98      7.3   742     0(0.00%)      0(0.00%)      ||
|| Nov       1.45       1.10       1.23      9.1   717     0(0.00%)      1(1.12%)      ||
|| Dec       1.64       1.16       1.79     20.0   739     2(0.27%)      4(4.40%)      ||
||-------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992       .2     .3      .3      .4      .6      .9     1.4     2.2     3.1     6.0    20.2 ||
||                                                                                    ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                  1 hour        8 hour        ||
|| 1992      1.20        .92       1.13     20.0  8737     3(0.03%)      9(0.83%)      ||
||------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                          CO  Summary Statistics for 1992
                          Calgary Residential Monitoring Station
                          Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                      ||
|| Ambient 8-hour average regulation =  5.0 PPM                                      ||
||-----------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter     .2      .2      .3      .3      .4      .6     1.1     2.0     2.9     5.9    12.7 ||
|| Spring     .2      .3      .3      .3      .4      .5      .6      .9     1.2     2.5     7.0 ||
|| Summer     .1      .2      .3      .3      .4      .5      .6      .7      .9     1.6     3.9 ||
|| Autumn     .1      .2      .3      .3      .4      .5      .8     1.3     1.9     4.3    11.7 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic   Range    N      Number of Exceedances    ||
||           Mean      Mean      Std Dev                     1 hour       8 hour       ||
|| Winter     .99       .72       1.08      12.5  2168     0(0.00%)     3(1.12%)       ||
|| Spring     .59       .52        .44       6.8  2177     0(0.00%)     0(0.00%)       ||
|| Summer     .53       .49        .25       3.8  2196     0(0.00%)     0(0.00%)       ||
|| Autumn     .72       .56        .78      11.6  2176     0(0.00%)     1(0.37%)       ||
||-----------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan        .2      .2      .3      .3      .4      .6     1.0     2.1     3.3     7.2    12.7 ||
|| Feb        .2      .2      .3      .3      .4      .7     1.2     2.0     2.8     5.6     6.8 ||
|| Mar        .2      .3      .3      .3      .4      .5      .8     1.3     1.8     3.9     7.0 ||
|| Apr        .2      .3      .3      .3      .4      .5      .6      .8     1.1     2.1     2.8 ||
|| May        .3      .3      .3      .3      .4      .4      .5      .7      .8     1.3     1.9 ||
|| Jun        .2      .3      .3      .4      .4      .5      .6      .7      .8     1.0     1.4 ||
|| Jul        .2      .3      .3      .4      .4      .5      .6      .7     1.0     1.4     3.9 ||
|| Aug        .1      .2      .2      .3      .4      .5      .6      .7     1.0     2.2     2.8 ||
|| Sep        .1      .2      .2      .3      .3      .4      .6      .9     1.3     2.8     5.5 ||
|| Oct        .2      .2      .3      .3      .4      .5      .8     1.4     2.0     4.2     8.1 ||
|| Nov        .3      .3      .3      .3      .4      .6     1.0     1.6     2.3     6.3    11.7 ||
|| Dec        .2      .2      .3      .4      .5      .7     1.1     1.9     2.6     4.7    10.4 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic   Range    N      Number of Exceedances    ||
||           Mean      Mean      Std Dev                     1 hour       8 hour       ||
|| Jan       1.02       .69       1.31      12.5   738     0(0.00%)     1(1.09%)       ||
|| Feb        .99       .73        .96       6.6   690     0(0.00%)     1(1.18%)       ||
|| Mar        .72       .59        .65       6.8   732     0(0.00%)     0(0.00%)       ||
|| Apr        .56       .51        .30       2.6   716     0(0.00%)     0(0.00%)       ||
|| May        .49       .47        .18       1.6   729     0(0.00%)     0(0.00%)       ||
|| Jun        .52       .50        .16       1.2   713     0(0.00%)     0(0.00%)       ||
|| Jul        .54       .51        .26       3.7   742     0(0.00%)     0(0.00%)       ||
|| Aug        .52       .46        .31       2.7   741     0(0.00%)     0(0.00%)       ||
|| Sep        .55       .47        .47       5.4   717     0(0.00%)     0(0.00%)       ||
|| Oct        .72       .56        .72       7.9   742     0(0.00%)     0(0.00%)       ||
|| Nov        .89       .68       1.01      11.4   717     0(0.00%)     1(1.12%)       ||
|| Dec        .96       .75        .94      10.2   740     0(0.00%)     1(1.10%)       ||
||------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992       .1      .2      .3      .3      .4      .5      .7     1.2     1.8     4.0    12.7 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic   Range    N      Number of Exceedances    ||
||           Mean      Mean      Std Dev                     1 hour       8 hour       ||
|| 1992       .71       .57        .73      12.6  8717     0(0.00%)     4(0.37%)       ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                          Wind Summary for 1992
                  Calgary Residential Monitoring Station
   ** calculation is for exceedances of the 8-hour regulation for CO  **
||-----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours)  ||
||                                                                       ||
||                           Wind Speed (km/h)                           ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL  ||
||    N        0     0     0     0     0     0     0     0      0     0  ||
||    NNE      1     0     0     0     0     0     0     0      0     1  ||
||    NE       0     0     0     0     0     0     0     0      0     0  ||
||    ENE      0     0     0     0     0     0     0     0      0     0  ||
||    E        0     0     0     0     0     0     0     0      0     0  ||
||    ESE      4     0     0     0     0     0     0     0      0     4  ||
||    SE       4     1     0     0     0     0     0     0      0     5  ||
||    SSE      0     0     0     0     0     0     0     0      0     0  ||
||    S        0     0     0     0     0     0     0     0      0     0  ||
||    SSW      1     0     0     0     0     0     0     0      0     1  ||
||    SW       1     0     0     0     0     0     0     0      0     1  ||
||    WSW      0     0     0     1     0     0     0     0      0     1  ||
||    W        4     0     1     0     0     0     0     0      0     5  ||
||    WNW      8     0     0     0     0     0     0     0      0     8  ||
||    NW       0     0     0     0     0     0     0     0      0     0  ||
||    NNW      1     0     0     0     0     0     0     0      0     1  ||
||  TOTAL     24     1     1     1     0     0     0     0      0    27  ||
||                                                                       ||
||  CALM =      5 hours                                                  ||
||  MISSING DATA =      0 hours                                          ||
||-----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)     ||
||                                                                       ||
||                           Wind Speed (km/h)                           ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL  ||
||    N       .0    .0    .0    .0    .0    .0    .0    .0     .0    .0  ||
||    NNE    3.1    .0    .0    .0    .0    .0    .0    .0     .0   3.1  ||
||    NE      .0    .0    .0    .0    .0    .0    .0    .0     .0    .0  ||
||    ENE     .0    .0    .0    .0    .0    .0    .0    .0     .0    .0  ||
||    E       .0    .0    .0    .0    .0    .0    .0    .0     .0    .0  ||
||    ESE   12.5    .0    .0    .0    .0    .0    .0    .0     .0  12.5  ||
||    SE    12.5   3.1    .0    .0    .0    .0    .0    .0     .0  15.6  ||
||    SSE     .0    .0    .0    .0    .0    .0    .0    .0     .0    .0  ||
||    S       .0    .0    .0    .0    .0    .0    .0    .0     .0    .0  ||
||    SSW    3.1    .0    .0    .0    .0    .0    .0    .0     .0   3.1  ||
||    SW     3.1    .0    .0    .0    .0    .0    .0    .0     .0   3.1  ||
||    WSW     .0    .0    .0   3.1    .0    .0    .0    .0     .0   3.1  ||
||    W     12.5    .0   3.1    .0    .0    .0    .0    .0     .0  15.6  ||
||    WNW   25.0    .0    .0    .0    .0    .0    .0    .0     .0  25.0  ||
||    NW      .0    .0    .0    .0    .0    .0    .0    .0     .0    .0  ||
||    NNW    3.1    .0    .0    .     .0    .0    .0    .0     .0   3.1  ||
||  TOTAL   75.0   3.1   3.1   3.     .0    .0    .0    .0     .0  84.4  ||
||                                                                       ||
||  CALM = 15.63%                                                        ||
||  MISSING DATA =   .00%                                                ||
||-----------------------------------------------------------------------||
                          CO  Summary Statistics for 1992
                          Calgary Industrial Monitoring Station
                          Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                      ||
|| Ambient 8-hour average regulation =  5.0 PPM                                      ||
||--------------------------------------BY SEASON------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%      MAX ||
|| Winter     .1     .3      .3      .4      .6      .9     1.8     3.4     4.6     7.4      9.4 ||
|| Spring     .1     .2      .3      .3      .4      .6      .9     1.4     1.9     3.5      5.2 ||
|| Summer     .1     .1      .2      .3      .4      .5      .7     1.0     1.2     1.8      3.0 ||
|| Autumn     .2     .2      .3      .3      .4      .7     1.3     2.5     3.4     5.6     10.7 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean    Std Dev                   1 hour       8 hour        ||
|| Winter    1.49       1.06       1.45      9.3  2163    0(0.00%)     2(0.75%)      ||
|| Spring     .77        .64        .61      5.1  1953    0(0.00%)     0(0.00%)      ||
|| Summer     .58        .49        .34      3.0  2138    0(0.00%)     0(0.00%)      ||
|| Autumn    1.11        .81       1.10     10.5  2176    0(0.00%)     0(0.00%)      ||
||--------------------------------------BY MONTH-------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%      MAX ||
|| Jan        .1     .3      .4      .4      .6     1.0     2.2     4.0     4.8     7.2      9.3 ||
|| Feb        .2     .3      .4      .4      .6     1.0     1.7     3.1     4.1     7.6      8.9 ||
|| Mar        .2     .3      .3      .4      .5      .7     1.1     1.8     2.8     3.9      5.2 ||
|| Apr        .1     .2      .3      .3      .4      .6      .8     1.2     1.6     2.6      4.9 ||
|| May        .1     .1      .3      .3      .4      .5      .7     1.0     1.4     2.5      3.8 ||
|| Jun        .2     .3      .3      .4      .4      .6      .7     1.0     1.1     1.7      2.6 ||
|| Jul        .1     .2      .3      .3      .4      .5      .7     1.0     1.2     1.8      2.2 ||
|| Aug        .1     .1      .1      .2      .3      .4      .6     1.0     1.3     2.1      3.0 ||
|| Sep        .2     .2      .3      .3      .4      .5      .9     1.8     2.6     4.3      5.8 ||
|| Oct        .2     .2      .3      .3      .5      .7     1.3     2.4     3.3     5.4      9.0 ||
|| Nov        .2     .3      .3      .4      .5      .9     1.7     3.1     4.3     6.5     10.7 ||
|| Dec        .2     .3      .3      .4      .5      .9     1.6     3.4     4.6     7.4      9.4 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean    Std Dev                   1 hour       8 hour        ||
|| Jan       1.62       1.13       1.51      9.2   734    0(0.00%)     0(0.00%)      ||
|| Feb       1.45       1.07       1.36      8.7   688    0(0.00%)     1(1.16%)      ||
|| Mar        .95        .77        .77      5.0   718    0(0.00%)     0(0.00%)      ||
|| Apr        .71        .61        .50      4.8   709    0(0.00%)     0(0.00%)      ||
|| May        .62        .53        .42      3.7   526    0(0.00%)     0(0.00%)      ||
|| Jun        .63        .58        .29      2.4   663    0(0.00%)     0(0.00%)      ||
|| Jul        .60        .54        .31      2.1   734    0(0.00%)     0(0.00%)      ||
|| Aug        .52        .38        .39      3.0   741    0(0.00%)     0(0.00%)      ||
|| Sep        .84        .64        .79      5.6   718    0(0.00%)     0(0.00%)      ||
|| Oct       1.11        .83       1.05      8.8   741    0(0.00%)     0(0.00%)      ||
|| Nov       1.39        .99       1.33     10.5   717    0(0.00%)     0(0.00%)      ||
|| Dec       1.40        .97       1.45      9.2   741    0(0.00%)     1(1.09%)      ||
||--------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%      MAX ||
|| 1992       .1     .2      .3      .3      .4      .6     1.1     2.1     3.1     5.6     10.7 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean    Std Dev                   1 hour       8 hour        ||
|| 1992      1.00        .72       1.04     10.7  8430    0(0.00%)     2(0.19%)      ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                         Wind Summary for 1992
                   Calgary Industrial Monitoring Station
  ** calculation is for exceedances of the 8-hour regulation for CO  **
||------------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours)  ||
||                                                                        ||
||                          Wind Speed (km/h)                             ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL     ||
||   N        0     0     0     0     0     0     0     0     0     0     ||
||   NNE      0     0     0     0     0     0     0     0     0     0     ||
||   NE       1     0     0     0     0     0     0     0     0     1     ||
||   ENE      1     0     0     0     0     0     0     0     0     1     ||
||   E        0     0     0     0     0     0     0     0     0     0     ||
||   ESE      1     0     0     0     0     0     0     0     0     1     ||
||   SE       0     0     0     0     0     0     0     0     0     0     ||
||   SSE      0     0     0     0     0     0     0     0     0     0     ||
||   S        2     0     0     0     0     0     0     0     0     2     ||
||   SSW      3     0     0     0     0     0     0     0     0     3     ||
||   SW       1     0     0     0     0     0     0     0     0     1     ||
||   WSW      3     0     0     0     0     0     0     0     0     3     ||
||   W        2     0     0     0     0     0     0     0     0     2     ||
||   WNW      1     0     0     0     0     0     0     0     0     1     ||
||   NW       0     0     0     0     0     0     0     0     0     0     ||
||   NNW      0     0     0     0     0     0     0     0     0     0     ||
||  TOTAL    15     0     0     0     0     0     0     0     0    15     ||
||                                                                        ||
||  CALM =      1 hours                                                   ||
||  MISSING DATA =      0 hours                                           ||
||------------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)      ||
||                                                                        ||
||                          Wind Speed (km/h)                             ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL     ||
||   N       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0     ||
||   NNE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0     ||
||   NE     6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3     ||
||   ENE    6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3     ||
||   E       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0     ||
||   ESE    6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3     ||
||   SE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0     ||
||   SSE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0     ||
||   S     12.5    .0    .0    .0    .0    .0    .0    .0    .0  12.5     ||
||   SSW   18.8    .0    .0    .0    .0    .0    .0    .0    .0  18.8     ||
||   SW     6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3     ||
||   WSW   18.8    .0    .0    .0    .0    .0    .0    .0    .0  18.8     ||
||   W     12.5    .0    .0    .0    .0    .0    .0    .0    .0  12.5     ||
||   WNW    6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3     ||
||   NW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0     ||
||   NNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0     ||
||  TOTAL  93.8    .0    .0    .0    .0    .0    .0    .0    .0  93.8     ||
||                                                                        ||
||  CALM =  6.25%                                                         ||
||  MISSING DATA =   .00%                                                 ||
||------------------------------------------------------------------------||
                             CO  Summary Statistics for 1992
                             Fort Saskatchewan Monitoring Station
                             Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                        ||
|| Ambient 8-hour average regulation =  5.0 PPM                                        ||
||--------------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .0     .0     .2     .3     .3     .5     .9    1.5    2.0    3.1    5.1 ||
|| Spring     .0     .0     .2     .2     .3     .3     .4     .6     .9    1.8    3.2 ||
|| Summer     .0     .0     .2     .2     .3     .3     .4     .5     .6     .9    1.2 ||
|| Autumn     .0     .1     .1     .2     .2     .3     .5     .9    1.4    2.2    3.5 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour       8 hour         ||
|| Winter     .71       .46        .62      5.1  1424     0(0.00%)     0(0.00%)        ||
|| Spring     .39       .26        .29      3.2  2194     0(0.00%)     0(0.00%)        ||
|| Summer     .32       .22        .14      1.2  2101     0(0.00%)     0(0.00%)        ||
|| Autumn     .47       .34        .44      3.5  2136     0(0.00%)     0(0.00%)        ||
||--------------------------------------BY MONTH---------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .2     .2     .2     .3     .4     .5    1.1    1.8    2.5    3.5    5.1 ||
|| Feb        .0     .0     .1     .3     .3     .4     .7    1.1    1.5    2.2    4.2 ||
|| Mar        .0     .0     .1     .2     .3     .4     .5    1.0    1.4    2.4    3.2 ||
|| Apr        .0     .0     .2     .2     .3     .3     .4     .5     .6    1.3    2.1 ||
|| May        .1     .1     .2     .2     .3     .3     .4     .4     .5     .8    1.3 ||
|| Jun        .0     .0     .2     .2     .3     .3     .3     .4     .5     .7     .8 ||
|| Jul        .0     .0     .2     .2     .3     .3     .4     .5     .6     .7    1.1 ||
|| Aug        .0     .0     .1     .2     .2     .3     .4     .5     .7    1.0    1.2 ||
|| Sep        .0     .0     .1     .1     .2     .3     .4     .6     .9    1.9    2.9 ||
|| Oct        .1     .1     .1     .2     .2     .3     .5     .8    1.1    1.9    3.4 ||
|| Nov        .1     .1     .2     .2     .3     .4     .7    1.4    2.0    3.1    3.5 ||
|| Dec       *      *      *      *      *      *      *      *      *      *      *    ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour       8 hour         ||
|| Jan        .84       .63        .73      4.9   733     0(0.00%)     0(0.00%)        ||
|| Feb        .58       .33        .44      4.2   691     0(0.00%)     0(0.00%)        ||
|| Mar        .50       .31        .43      3.2   736     0(0.00%)     0(0.00%)        ||
|| Apr        .35       .26        .19      2.1   714     0(0.00%)     0(0.00%)        ||
|| May        .32       .31        .11      1.2   744     0(0.00%)     0(0.00%)        ||
|| Jun        .31       .26        .09       .8   720     0(0.00%)     0(0.00%)        ||
|| Jul        .33       .26        .13      1.1   734     0(0.00%)     0(0.00%)        ||
|| Aug        .32       .15        .18      1.2   647     0(0.00%)     0(0.00%)        ||
|| Sep        .36       .24        .31      2.9   672     0(0.00%)     0(0.00%)        ||
|| Oct        .43       .34        .35      3.3   744     0(0.00%)     0(0.00%)        ||
|| Nov        .61       .46        .57      3.4   720     0(0.00%)     0(0.00%)        ||
|| Dec         *         *          *        *      *               *                  ||
||---------------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .0     .0     .2     .2     .3     .3     .5     .8    1.2    2.3    5.1 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour       8 hour         ||
|| 1992       .45       .30        .41      5.1  7855     0(0.00%)     0(0.00%)        ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                         CO  Summary Statistics for 1992
                         Fort McMurray Monitoring Station
                         Units are PPM (parts per million)
||------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation = 13.0 PPM                                        ||
|| Ambient 8-hour average regulation =  5.0 PPM                                        ||
||-------------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .0     .0     .0     .2     .3     .5     .7    1.1    1.7    3.0    5.0 ||
|| Spring     .0     .2     .2     .2     .3     .3     .4     .6     .8    1.5    2.6 ||
|| Summer     .2     .2     .2     .2     .3     .3     .4     .5     .6     .9    1.8 ||
|| Autumn     .0     .1     .1     .2     .3     .4     .7    1.2    1.7    2.7    4.5 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                   1 hour      8 hour           ||
|| Winter     .61       .31       .56       5.0  2157     0(0.00%)    0(0.00%)         ||
|| Spring     .39       .35       .24       2.6  1999     0(0.00%)    0(0.00%)         ||
|| Summer     .35       .32       .15       1.6   910     0(0.00%)    0(0.00%)         ||
|| Autumn     .57       .41       .52       4.5  1286     0(0.00%)    0(0.00%)         ||
||-------------------------------------BY MONTH---------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .0     .0     .0     .0     .3     .5     .8    1.5    2.1    3.5    5.0 ||
|| Feb        .2     .3     .3     .3     .4     .5     .7    1.0    1.6    3.4    4.4 ||
|| Mar        .0     .2     .2     .2     .3     .4     .5     .8    1.1    2.1    2.5 ||
|| Apr        .0     .2     .2     .2     .3     .3     .4     .5     .7    1.3    2.6 ||
|| May        .2     .2     .2     .2     .3     .3     .4     .5     .7    1.2    1.5 ||
|| Jun        .2     .2     .2     .2     .3     .3     .4     .5     .6     .9    1.8 ||
|| Jul        .2     .2     .2     .2     .2     .3     .4     .5     .6     .9    1.5 ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *  ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *  ||
|| Oct        .1     .1     .2     .2     .3     .4     .6    1.2    1.7    2.8    3.8 ||
|| Nov        .0     .1     .1     .2     .3     .4     .7    1.2    1.6    2.6    4.5 ||
|| Dec        .0     .0     .1     .2     .3     .4     .7    1.1    1.4    2.3    2.5 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                   1 hour      8 hour           ||
|| Jan        .67       .19       .70       5.0   742     0(0.00%)    0(0.00%)         ||
|| Feb        .64       .55       .51       4.2   695     0(0.00%)    0(0.00%)         ||
|| Mar        .48       .40       .33       2.5   538     0(0.00%)    0(0.00%)         ||
|| Apr        .37       .33       .20       2.6   719     0(0.00%)    0(0.00%)         ||
|| May        .35       .33       .18       1.3   742     0(0.00%)    0(0.00%)         ||
|| Jun        .35       .32       .15       1.6   718     0(0.00%)    0(0.00%)         ||
|| Jul        .33       .31       .15       1.3   192     0(0.00%)    0(0.00%)         ||
|| Aug        *         *         *         *     *                *                   ||
|| Sep        *         *         *         *     *                *                   ||
|| Oct        .58       .44       .52       3.7   566     0(0.00%)    0(0.00%)         ||
|| Nov        .57       .38       .52       4.5   720     0(0.00%)    0(0.00%)         ||
|| Dec        .54       .35       .43       2.5   720     0(0.00%)    0(0.00%)         ||
||-------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .0     .0     .2     .2     .3     .4     .5     .9    1.3    2.5    5.0 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                   1 hour      8 hour           ||
|| 1992       .50       .27       .44       5.0  6352     0(0.00%)    0(0.00%)         ||
||------------------------------------------------------------------------------------||
   n/a - not applicable         * - no data
```

Annual Average Concentration
Year: 1992
Pollutant: CO [ppm]

Year	EDMU	ERMU	EIMU	CDMU	CRMU	CIMU	Fort Sask.	Fort McMurray
1976	1.57	1.86	0.64	2.11	1.25	1.78	*	*
1977	2.01	1.50	0.36	2.36	1.37	1.60	*	*
1978	2.05	1.34	0.33	2.77	1.17	1.51	*	
1979	3.28	1.75	0.39	2.88	1.05	1.68	*	0.40a
1980	2.97	1.78	0.66	2.34	1.08	1.25	*	0.37
1981	2.18	1.62	1.01	2.33	1.04	1.96	b	0.48
1982	1.89	1.04	0.91	2.01	0.99	1.37	0.89	0.54
1983	1.78	1.22	0.85	2.10	1.09	1.33	0.71	b
1984	1.63	1.15	0.78	1.84	0.93	1.22	0.65	0.32a
1985	1.51	0.95	0.73	1.68	0.82	1.12	0.58	0.20
1986	1.55	1.27	0.57	1.90	0.89	1.34	0.79	0.34
1987	1.67	1.48	0.61	1.69	0.75	1.30	0.98	0.54
1988	1.50	1.27	0.56	1.68	0.72	1.39	0.74	0.54
1989	1.65	1.16	0.57	1.48	0.68	1.21	0.44a	0.46
1990	1.42	1.07	0.54	1.26	0.62	1.06	0.45	0.59
1991	1.30	1.13	0.54	1.35	0.74	1.13	0.44	0.51
1992	1.15	1.08	0.53	1.20	0.71	1.00	0.45	0.50

a 50% to 75% of data available
b less than 50% of data available

```
                              CO2 Summary Statistics for 1992
                              Calgary Downtown Monitoring Station
                              Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| No regulations                                                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%     5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter    359.   367.   375.   380.   392.   405.   423.   455.   483.   529.   606.||
|| Spring    344.   348.   355.   359.   367.   379.   392.   405.   416.   443.   544.||
|| Summer    333.   341.   352.   355.   362.   371.   383.   403.   416.   436.   476.||
|| Autumn    341.   356.   361.   365.   375.   389.   404.   425.   439.   470.   540.||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N     Number of Exceedances        ||
||           Mean      Mean     Std Dev                                                ||
|| Winter   412.7     411.5      33.3     247.  2170            n/a                   ||
|| Spring   381.2     380.7      19.8     200.  2137            n/a                   ||
|| Summer   375.3     374.8      19.7     143.  2193            n/a                   ||
|| Autumn   392.7     392.0      24.5     199.  2133            n/a                   ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%     5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan       359.   363.   370.   373.   381.   395.   413.   445.   469.   531.   606.||
|| Feb       366.   374.   385.   388.   398.   410.   429.   461.   486.   537.   601.||
|| Mar       352.   370.   377.   380.   386.   393.   404.   419.   432.   468.   544.||
|| Apr       348.   352.   355.   359.   364.   373.   384.   395.   404.   423.   436.||
|| May       344.   346.   351.   354.   362.   369.   377.   387.   395.   414.   439.||
|| Jun       355.   357.   363.   366.   371.   377.   387.   402.   414.   442.   458.||
|| Jul       333.   338.   344.   350.   356.   365.   379.   399.   412.   435.   476.||
|| Aug       340.   349.   354.   356.   361.   368.   381.   410.   424.   437.   458.||
|| Sep       341.   352.   357.   359.   364.   373.   386.   410.   428.   460.   473.||
|| Oct       355.   363.   370.   373.   382.   391.   404.   422.   436.   462.   497.||
|| Nov       365.   369.   378.   380.   386.   399.   416.   432.   447.   492.   540.||
|| Dec       370.   375.   384.   388.   396.   407.   426.   457.   488.   524.   599.||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N     Number of Exceedances        ||
||           Mean      Mean     Std Dev                                                ||
|| Jan      403.8     402.5      33.7     247.   739            n/a                   ||
|| Feb      418.8     417.6      32.6     235.   690            n/a                   ||
|| Mar      397.2     396.8      18.7     192.   737            n/a                   ||
|| Apr      375.6     375.3      14.9      88.   667            n/a                   ||
|| May      370.2     370.0      13.6      95.   733            n/a                   ||
|| Jun      380.8     380.5      15.7     103.   715            n/a                   ||
|| Jul      370.1     369.5      20.9     143.   740            n/a                   ||
|| Aug      375.1     374.6      20.7     118.   738            n/a                   ||
|| Sep      379.1     378.5      22.1     132.   716            n/a                   ||
|| Oct      395.3     394.8      20.8     142.   707            n/a                   ||
|| Nov      403.8     403.1      23.8     175.   710            n/a                   ||
|| Dec      415.9     414.8      31.8     229.   741            n/a                   ||
||-------------------------------------BY YEAR-----------------------------------------||
|| YEAR      MIN     1%     5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992      333.   348.   356.   361.   370.   386.   404.   425.   443.   496.   606.||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N     Number of Exceedances        ||
||           Mean      Mean     Std Dev                                                ||
|| 1992     390.5     389.5      28.8     273.  8633            n/a                   ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                              CO2 Summary Statistics for 1992
                              Springbank Airport Monitoring Station
                              Units are PPM (parts per million)
||------------------------------------------------------------------------------||
|| No regulations                                                               ||
||-----------------------------------BY SEASON----------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter    350.   353.   355.   357.   363.   370.   375.   380.   383.   395.   425.||
|| Spring    352.   354.   357.   360.   365.   370.   375.   383.   390.   403.   464.||
|| Summer    325.   332.   341.   345.   353.   365.   387.   424.   442.   478.   555.||
|| Autumn    341.   347.   351.   354.   361.   367.   373.   380.   385.   399.   414.||
||                                                                              ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                                        ||
|| Winter   369.5      369.4        8.9      75.  2166             n/a          ||
|| Spring   371.0      370.9       10.6     112.  2182             n/a          ||
|| Summer   375.1      373.8       32.2     230.  2178             n/a          ||
|| Autumn   367.3      367.2       10.4      73.  2090             n/a          ||
||-----------------------------------BY MONTH-----------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan       350.   352.   355.   356.   360.   368.   373.   379.   382.   391.   406.||
|| Feb       360.   362.   366.   367.   370.   374.   378.   383.   387.   405.   425.||
|| Mar       356.   360.   363.   364.   368.   371.   377.   382.   385.   393.   405.||
|| Apr       354.   355.   357.   359.   364.   369.   373.   378.   383.   393.   404.||
|| May       352.   353.   356.   357.   363.   368.   376.   391.   397.   434.   464.||
|| Jun       340.   344.   348.   350.   357.   366.   384.   413.   433.   468.   489.||
|| Jul       325.   328.   336.   340.   347.   362.   395.   438.   457.   502.   555.||
|| Aug       338.   341.   344.   347.   353.   365.   387.   423.   437.   466.   490.||
|| Sep       346.   347.   349.   351.   356.   362.   371.   384.   390.   407.   414.||
|| Oct       341.   345.   351.   355.   361.   366.   374.   382.   388.   401.   411.||
|| Nov       353.   354.   359.   360.   366.   370.   373.   376.   379.   385.   389.||
|| Dec       351.   352.   354.   356.   361.   367.   371.   376.   378.   384.   406.||
||                                                                              ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                                        ||
|| Jan      367.6      367.5        8.8      56.   734             n/a          ||
|| Feb      375.2      375.1        7.6      65.   692             n/a          ||
|| Mar      372.6      372.5        7.1      49.   730             n/a          ||
|| Apr      368.8      368.8        7.7      50.   713             n/a          ||
|| May      371.6      371.4       14.7     112.   739             n/a          ||
|| Jun      374.8      373.9       26.3     149.   706             n/a          ||
|| Jul      375.8      373.8       39.4     230.   733             n/a          ||
|| Aug      374.7      373.6       29.3     152.   739             n/a          ||
|| Sep      364.7      364.5       12.8      68.   643             n/a          ||
|| Oct      367.8      367.6       10.8      70.   734             n/a          ||
|| Nov      369.2      369.2        6.2      36.   713             n/a          ||
|| Dec      366.2      366.2        7.6      55.   740             n/a          ||
||-----------------------------------BY YEAR------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992      325.   341.   349.   354.   361.   368.   376.   386.   403.   450.   555.||
||                                                                              ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                                        ||
|| 1992     370.8      370.4       18.6     230.  8616             n/a          ||
||------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
||------------------------------||
||Annual Average Concentration  ||
||Year: 1992                    ||
||Pollutant: CO2 [ppm]          ||
||------------------------------||
||   Year    | CDMU  Springbank ||
||           |          Airport ||
||-----------+------------------||
||   1976    |   *        *     ||
||   1977    |   *        *     ||
||   1978    |   *        *     ||
||   1979    |   *        *     ||
||   1980    |   *        *     ||
||   1981    |   *        *     ||
||   1982    |   *        *     ||
||   1983    |   *        *     ||
||   1984    |   *        *     ||
||   1985    |   *        *     ||
||   1986    |   *        *     ||
||   1987    |   *        *     ||
||   1988    |   *        *     ||
||   1989    |   *        *     ||
||   1990    |   *        *     ||
||   1991    |  376         366 ||
||   1992    |  391         371 ||
||------------------------------||

a  50% to 75% of data available
b  less than 50% of data available
```

```
                         COH Summary Statistics for 1992
                         Edmonton Central Monitoring Station
                         Units are COH units
||----------------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                      ||
||-----------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .0     .0     .0     .0     .1     .2     .4     .6     .8    1.3    2.1 ||
|| Spring     .0     .0     .0     .0     .1     .1     .2     .4     .5     .8    1.9 ||
|| Summer     .0     .0     .0     .0     .0     .1     .2     .3     .4     .7    1.6 ||
|| Autumn     .0     .0     .0     .0     .1     .2     .3     .6     .8    1.4    2.2 ||
||                                                                                  ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                             ||
|| Winter     .28        .08         .26     2.1  2160    43(1.99%)                 ||
|| Spring     .16        .05         .17     1.9  2208    10(0.45%)                 ||
|| Summer     .14        .03         .15     1.6  2189     5(0.23%)                 ||
|| Autumn     .27        .08         .28     2.2  2184    55(2.52%)                 ||
||------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .0     .0     .0     .0     .1     .2     .3     .5     .8    1.5    1.9 ||
|| Feb        .0     .0     .0     .0     .1     .2     .3     .5     .7     .9    1.4 ||
|| Mar        .0     .0     .0     .0     .1     .1     .3     .5     .7    1.2    1.9 ||
|| Apr        .0     .0     .0     .0     .1     .1     .2     .3     .4     .6     .8 ||
|| May        .0     .0     .0     .0     .1     .1     .2     .3     .4     .6    1.1 ||
|| Jun        .0     .0     .0     .0     .0     .1     .2     .2     .3     .6     .8 ||
|| Jul        .0     .0     .0     .0     .0     .1     .2     .3     .4     .6     .8 ||
|| Aug        .0     .0     .0     .0     .0     .1     .2     .3     .4     .8    1.6 ||
|| Sep        .0     .0     .0     .0     .1     .2     .3     .6     .8    1.3    2.0 ||
|| Oct        .0     .0     .0     .0     .1     .2     .4     .6     .8    1.7    2.2 ||
|| Nov        .0     .0     .0     .0     .1     .2     .4     .6     .7    1.2    1.7 ||
|| Dec        .0     .0     .0     .1     .1     .3     .5     .7     .9    1.5    2.1 ||
||                                                                                  ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                             ||
|| Jan        .24        .05         .26     1.9   744    15(2.02%)                 ||
|| Feb        .25        .08         .21     1.4   672     4(0.60%)                 ||
|| Mar        .21        .06         .22     1.9   744     9(1.21%)                 ||
|| Apr        .14        .04         .13      .8   720     0(0.00%)                 ||
|| May        .15        .06         .13     1.1   744     1(0.13%)                 ||
|| Jun        .12        .02         .12      .8   703     0(0.00%)                 ||
|| Jul        .15        .04         .14      .8   744     0(0.00%)                 ||
|| Aug        .15        .03         .17     1.6   742     5(0.67%)                 ||
|| Sep        .24        .06         .27     2.0   720    19(2.64%)                 ||
|| Oct        .29        .09         .31     2.2   744    26(3.49%)                 ||
|| Nov        .26        .09         .23     1.7   720    10(1.39%)                 ||
|| Dec        .34        .14         .30     2.1   744    24(3.23%)                 ||
||------------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .0     .0     .0     .0     .1     .1     .3     .5     .6    1.1    2.2 ||
||                                                                                  ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                             ||
|| 1992       .21        .05         .23     2.2  8741   113(1.29%)                 ||
||----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                                    COH Summary Statistics for 1992
                                    Edmonton Northwest Monitoring Station
                                    Units are COH units
||-------------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                   ||
||-----------------------------------BY SEASON-----------------------------------||
|| SEASON    MIN     1%      5%      10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter     .0      .0      .0      .0      .1      .2      .5      .9     1.1     1.9     3.2 ||
|| Spring     .0      .0      .0      .0      .0      .1      .2      .4      .6     1.2     3.0 ||
|| Summer     .0      .0      .0      .0      .0      .1      .1      .2      .4      .7     1.7 ||
|| Autumn     .0      .0      .0      .0      .0      .1      .4      .8     1.0     2.1     4.5 ||
||                                                                               ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                          ||
|| Winter     .36       .08        .39      3.2  2160   135(6.25%)               ||
|| Spring     .16       .01        .25      3.0  2208    36(1.63%)               ||
|| Summer     .10       .01        .15      1.7  2207     9(0.41%)               ||
|| Autumn     .29       .02        .43      4.5  2184   105(4.81%)               ||
||-----------------------------------BY MONTH------------------------------------||
|| MONTH     MIN     1%      5%      10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan        .0      .0      .0      .0      .1      .2      .6     1.0     1.3     2.1     3.2 ||
|| Feb        .0      .0      .0      .0      .1      .2      .4      .7      .9     1.3     2.0 ||
|| Mar        .0      .0      .0      .0      .0      .1      .3      .6     1.0     1.6     3.0 ||
|| Apr        .0      .0      .0      .0      .0      .1      .1      .3      .5     1.0     1.6 ||
|| May        .0      .0      .0      .0      .0      .1      .1      .3      .4      .6     1.4 ||
|| Jun        .0      .0      .0      .0      .0      .1      .1      .2      .2      .5     1.0 ||
|| Jul        .0      .0      .0      .0      .0      .1      .1      .3      .3      .9     1.7 ||
|| Aug        .0      .0      .0      .0      .0      .1      .2      .3      .4      .8     1.2 ||
|| Sep        .0      .0      .0      .0      .0      .1      .3      .6      .9     2.0     4.5 ||
|| Oct        .0      .0      .0      .0      .0      .2      .4      .8     1.3     2.8     3.5 ||
|| Nov        .0      .0      .0      .0      .1      .2      .5      .8     1.0     1.6     1.8 ||
|| Dec        .0      .0      .0      .0      .1      .2      .5      .8     1.1     1.9     2.4 ||
||                                                                               ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                          ||
|| Jan        .40       .07        .46      3.2   744    66(8.87%)               ||
|| Feb        .32       .10        .30      2.0   672    25(3.72%)               ||
|| Mar        .26       .03        .34      3.0   744    30(4.03%)               ||
|| Apr        .13       .01        .19      1.6   720     5(0.69%)               ||
|| May        .11       .01        .14      1.4   744     1(0.13%)               ||
|| Jun        .08       .01        .10      1.0   720     0(0.00%)               ||
|| Jul        .11       .01        .17      1.7   743     6(0.81%)               ||
|| Aug        .12       .00        .16      1.2   744     3(0.40%)               ||
|| Sep        .23       .00        .43      4.5   720    29(4.03%)               ||
|| Oct        .33       .03        .50      3.5   744    47(6.32%)               ||
|| Nov        .31       .05        .34      1.8   720    29(4.03%)               ||
|| Dec        .36       .08        .39      2.4   744    44(5.91%)               ||
||------------------------------------BY YEAR------------------------------------||
|| YEAR      MIN     1%      5%      10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992       .0      .0      .0      .0      .0      .1      .3      .6      .9     1.6     4.5 ||
||                                                                               ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                          ||
|| 1992       .23       .01        .34      4.5  8759   285(3.25%)               ||
||-------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                          Wind Summary for 1992
                   Edmonton Northwest Monitoring Station
           ** calculation is for values greater than 1.0 COH unit **
||---------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                      ||
||                            Wind Speed (km/h)                         ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL   ||
||   N        1     1     0     0     0     0     0     0     0     2   ||
||   NNE      3     0     0     0     0     0     0     0     0     3   ||
||   NE       2     1     0     0     0     0     0     0     0     3   ||
||   ENE      4     1     0     0     0     0     0     0     0     5   ||
||   E        3     1     0     0     0     0     0     0     0     4   ||
||   ESE      9     2     0     0     0     0     0     0     0    11   ||
||   SE       4     5     0     0     0     0     0     0     0     9   ||
||   SSE      4     0     0     0     0     0     0     0     0     4   ||
||   S       36    18     0     0     0     0     0     0     0    54   ||
||   SSW     26    26     1     0     0     0     0     0     0    53   ||
||   SW      35    42     0     0     0     0     0     0     0    77   ||
||   WSW     18    11     0     0     0     0     0     0     0    29   ||
||   W        7     2     0     0     0     0     0     0     0     9   ||
||   WNW      7     2     0     0     0     0     0     0     0     9   ||
||   NW       2     0     0     0     0     0     0     0     0     2   ||
||   NNW      4     1     0     0     0     0     0     0     0     5   ||
|| TOTAL    165   113     1     0     0     0     0     0     0   279   ||
||                                                                      ||
|| CALM =      6 hours                                                  ||
|| MISSING DATA =     0 hours                                           ||
||---------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                      ||
||                            Wind Speed (km/h)                         ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL   ||
||   N       .4    .4    .0    .0    .0    .0    .0    .0    .0    .7   ||
||   NNE    1.1    .0    .0    .0    .0    .0    .0    .0    .0   1.1   ||
||   NE      .7    .4    .0    .0    .0    .0    .0    .0    .0   1.1   ||
||   ENE    1.4    .4    .0    .0    .0    .0    .0    .0    .0   1.8   ||
||   E      1.1    .4    .0    .0    .0    .0    .0    .0    .0   1.4   ||
||   ESE    3.2    .7    .0    .0    .0    .0    .0    .0    .0   3.9   ||
||   SE     1.4   1.8    .0    .0    .0    .0    .0    .0    .0   3.2   ||
||   SSE    1.4    .0    .0    .0    .0    .0    .0    .0    .0   1.4   ||
||   S     12.6   6.3    .0    .0    .0    .0    .0    .0    .0  18.9   ||
||   SSW    9.1   9.1    .4    .0    .0    .0    .0    .0    .0  18.6   ||
||   SW    12.3  14.7    .0    .0    .0    .0    .0    .0    .0  27.0   ||
||   WSW    6.3   3.9    .0    .0    .0    .0    .0    .0    .0  10.2   ||
||   W      2.5    .7    .0    .0    .0    .0    .0    .0    .0   3.2   ||
||   WNW    2.5    .7    .0    .0    .0    .0    .0    .0    .0   3.2   ||
||   NW      .7    .0    .0    .0    .0    .0    .0    .0    .0    .7   ||
||   NNW    1.4    .4    .0    .0    .0    .0    .0    .0    .0   1.8   ||
|| TOTAL   57.9  39.6    .4    .0    .0    .0    .0    .0    .0  97.9   ||
||                                                                      ||
|| CALM =  2.11%                                                        ||
|| MISSING DATA =   .00%                                                ||
||---------------------------------------------------------------------||
                              COH Summary Statistics for 1992
                              Edmonton East Monitoring Station
                              Units are COH units
||--------------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                    ||
||------------------------------------BY SEASON-----------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter     .0     .0      .0      .0      .1      .2      .4      .8     1.1     1.8     3.2 ||
|| Spring     .0     .0      .0      .0      .0      .1      .2      .4      .6     1.2     2.4 ||
|| Summer     .0     .0      .0      .0      .0      .1      .2      .4      .6     1.1     2.1 ||
|| Autumn     .0     .0      .0      .0      .0      .1      .4      .8     1.1     1.8     3.0 ||
||                                                                                ||
|| SEASON Arithmetic Geometric Arithmetic  Range    N   Number of Values > 1.0 COH unit ||
||           Mean       Mean      Std Dev                                         ||
|| Winter     .30        .04        .39       3.2  2154   127(5.90%)              ||
|| Spring     .16        .01        .23       2.4  2194    32(1.46%)              ||
|| Summer     .17        .02        .23       2.1  2034    23(1.13%)              ||
|| Autumn     .29        .02        .40       3.0  2174   116(5.34%)              ||
||------------------------------------BY MONTH------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan        .0     .0      .0      .0      .0      .2      .4     1.0     1.2     2.0     2.4 ||
|| Feb        .0     .0      .0      .0      .1      .2      .4      .7      .9     1.5     2.9 ||
|| Mar        .0     .0      .0      .0      .0      .1      .3      .6      .9     1.3     1.5 ||
|| Apr        .0     .0      .0      .0      .0      .1      .2      .3      .5     1.1     1.4 ||
|| May        .0     .0      .0      .0      .0      .1      .1      .3      .4      .9     2.4 ||
|| Jun        .0     .0      .0      .0      .0      .1      .2      .3      .4      .8     1.1 ||
|| Jul        .0     .0      .0      .0      .0      .1      .2      .5      .6     1.0     1.6 ||
|| Aug        .0     .0      .0      .0      .0      .1      .3      .5      .8     1.3     2.1 ||
|| Sep        .0     .0      .0      .0      .0      .1      .3      .7     1.0     1.8     2.9 ||
|| Oct        .0     .0      .0      .0      .0      .2      .4      .8     1.2     2.3     3.0 ||
|| Nov        .0     .0      .0      .0      .0      .1      .4      .7     1.0     1.8     2.6 ||
|| Dec        .0     .0      .0      .0      .0      .2      .4      .8     1.2     1.9     3.2 ||
||                                                                                ||
|| MONTH  Arithmetic Geometric Arithmetic  Range    N   Number of Values > 1.0 COH unit ||
||           Mean       Mean      Std Dev                                         ||
|| Jan        .33        .03        .43       2.4   744    65(8.74%)              ||
|| Feb        .28        .05        .31       2.9   669    16(2.39%)              ||
|| Mar        .23        .03        .28       1.5   735    20(2.72%)              ||
|| Apr        .14        .01        .20       1.4   720     7(0.97%)              ||
|| May        .12        .01        .19       2.4   739     5(0.68%)              ||
|| Jun        .13        .02        .16       1.1   681     1(0.15%)              ||
|| Jul        .18        .02        .22       1.6   611     5(0.82%)              ||
|| Aug        .21        .02        .28       2.1   742    17(2.29%)              ||
|| Sep        .27        .02        .39       2.9   720    36(5.00%)              ||
|| Oct        .30        .03        .43       3.0   744    46(6.18%)              ||
|| Nov        .28        .02        .37       2.6   710    34(4.79%)              ||
|| Dec        .30        .04        .41       3.2   741    46(6.21%)              ||
||------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992       .0     .0      .0      .0      .0      .1      .3      .6      .9     1.6     3.2 ||
||                                                                                ||
|| YEAR   Arithmetic Geometric Arithmetic  Range    N   Number of Values > 1.0 COH unit ||
||           Mean       Mean      Std Dev                                         ||
|| 1992       .23        .02        .33       3.2  8556   298(3.48%)              ||
||--------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                          Wind Summary for 1992
                     Edmonton East Monitoring Station
          ** calculation is for values greater than 1.0 COH unit **
||--------------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours)    ||
||                                                                          ||
||                            Wind Speed (km/h)                             ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL      ||
||    N        8     1     0     0     0     0     0     0     0     9      ||
||    NNE      3     0     0     0     0     0     0     0     0     3      ||
||    NE       4     0     0     0     0     0     0     0     0     4      ||
||    ENE      2     0     0     0     0     0     0     0     0     2      ||
||    E        0     0     0     0     0     0     0     0     0     0      ||
||    ESE      1     0     0     0     0     0     0     0     0     1      ||
||    SE       1     2     0     0     0     0     0     0     0     3      ||
||    SSE      3     0     0     0     0     0     0     0     0     3      ||
||    S        9    11     9     5     0     0     0     0     0    34      ||
||    SSW     15    52    68     4     0     0     0     0     0   139      ||
||    SW      14    20    23     1     0     0     0     0     0    58      ||
||    WSW      8     2     1     0     0     0     0     0     0    11      ||
||    W        3     5     0     0     0     0     0     0     0     8      ||
||    WNW     10     4     0     0     0     0     0     0     0    14      ||
||    NW       5     1     0     0     0     0     0     0     0     6      ||
||    NNW      2     0     0     0     0     0     0     0     0     2      ||
||  TOTAL     88    98   101    10     0     0     0     0     0   297      ||
||                                                                          ||
||  CALM =      1 hours                                                     ||
||  MISSING DATA =     0 hours                                              ||
||--------------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)        ||
||                                                                          ||
||                            Wind Speed (km/h)                             ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL      ||
||    N      2.7    .3    .0    .0    .0    .0    .0    .0    .0   3.0      ||
||    NNE    1.0    .0    .0    .0    .0    .0    .0    .0    .0   1.0      ||
||    NE     1.3    .0    .0    .0    .0    .0    .0    .0    .0   1.3      ||
||    ENE     .7    .0    .0    .0    .0    .0    .0    .0    .0    .7      ||
||    E       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0      ||
||    ESE     .3    .0    .0    .0    .0    .0    .0    .0    .0    .3      ||
||    SE      .3    .7    .0    .0    .0    .0    .0    .0    .0   1.0      ||
||    SSE    1.0    .0    .0    .0    .0    .0    .0    .0    .0   1.0      ||
||    S      3.0   3.7   3.0   1.7    .0    .0    .0    .0    .0  11.4      ||
||    SSW    5.0  17.4  22.8   1.3    .0    .0    .0    .0    .0  46.6      ||
||    SW     4.7   6.7   7.7    .3    .0    .0    .0    .0    .0  19.5      ||
||    WSW    2.7    .7    .3    .0    .0    .0    .0    .0    .0   3.7      ||
||    W      1.0   1.7    .0    .0    .0    .0    .0    .0    .0   2.7      ||
||    WNW    3.4   1.3    .0    .0    .0    .0    .0    .0    .0   4.7      ||
||    NW     1.7    .3    .0    .0    .0    .0    .0    .0    .0   2.0      ||
||    NNW     .7    .0    .0    .0    .0    .0    .0    .0    .0    .7      ||
||  TOTAL   29.5  32.9  33.9   3.4    .0    .0    .0    .0    .0  99.7      ||
||                                                                          ||
||  CALM =   .34%                                                           ||
||  MISSING DATA =   .00%                                                   ||
||--------------------------------------------------------------------------||
                    COH Summary Statistics for 1992
                    Calgary Downtown Monitoring Station
                    Units are COH units
||-----------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                 ||
||-----------------------------------BY SEASON---------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .0     .0     .0     .0     .1     .2     .3     .5     .7    1.2    1.9 ||
|| Spring     .0     .0     .0     .0     .0     .1     .2     .3     .4     .6    1.1 ||
|| Summer     .0     .0     .0     .0     .1     .1     .2     .4     .4     .6    1.1 ||
|| Autumn     .0     .0     .0     .0     .1     .2     .3     .5     .6    1.2    1.9 ||
||                                                                             ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                       ||
|| Winter     .24        .05        .25      1.9  2159    36(1.67%)            ||
|| Spring     .12        .01        .13      1.1  2207     1(0.05%)            ||
|| Summer     .17        .05        .14      1.1  2204     1(0.05%)            ||
|| Autumn     .22        .05        .22      1.9  2184    25(1.14%)            ||
||-----------------------------------BY MONTH----------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .0     .0     .0     .0     .0     .1     .3     .5     .8    1.2    1.9 ||
|| Feb        .0     .0     .0     .0     .1     .2     .4     .6     .7    1.1    1.4 ||
|| Mar        .0     .0     .0     .0     .0     .1     .2     .3     .4     .7    1.0 ||
|| Apr        .0     .0     .0     .0     .0     .1     .2     .3     .4     .7    1.1 ||
|| May        .0     .0     .0     .0     .0     .1     .1     .2     .3     .4     .7 ||
|| Jun        .0     .0     .0     .0     .0     .1     .2     .3     .4     .6     .9 ||
|| Jul        .0     .0     .0     .0     .1     .1     .2     .3     .4     .5     .6 ||
|| Aug        .0     .0     .0     .0     .1     .2     .3     .4     .5     .7    1.1 ||
|| Sep        .0     .0     .0     .0     .1     .1     .3     .5     .7    1.3    1.5 ||
|| Oct        .0     .0     .0     .0     .1     .2     .3     .5     .6     .9    1.9 ||
|| Nov        .0     .0     .0     .0     .1     .2     .3     .5     .7    1.2    1.6 ||
|| Dec        .0     .0     .0     .0     .1     .2     .3     .5     .7    1.3    1.7 ||
||                                                                             ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                       ||
|| Jan        .22        .04        .26      1.9   744    16(2.15%)            ||
|| Feb        .26        .07        .24      1.4   696     8(1.15%)            ||
|| Mar        .14        .03        .14      1.0   744     0(0.00%)            ||
|| Apr        .12        .02        .14      1.1   720     1(0.14%)            ||
|| May        .09        .01        .10       .7   743     0(0.00%)            ||
|| Jun        .15        .03        .14       .9   719     0(0.00%)            ||
|| Jul        .14        .04        .12       .6   743     0(0.00%)            ||
|| Aug        .20        .07        .17      1.1   742     1(0.13%)            ||
|| Sep        .21        .07        .23      1.5   720    14(1.94%)            ||
|| Oct        .21        .04        .21      1.9   744     2(0.27%)            ||
|| Nov        .22        .05        .23      1.6   720     9(1.25%)            ||
|| Dec        .23        .06        .24      1.7   719    12(1.67%)            ||
||-----------------------------------BY YEAR-----------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .0     .0     .0     .0     .0     .1     .2     .4     .6    1.0    1.9 ||
||                                                                             ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                       ||
|| 1992       .18        .04        .20      1.9  8754    63(0.72%)            ||
||-----------------------------------------------------------------------------||
   n/a - not applicable         * - no data
```

```
                         COH Summary Statistics for 1992
                         Calgary Residential Monitoring Station
                         Units are COH units
||------------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                  ||
||-----------------------------------BY SEASON----------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%    MAX ||
|| Winter     .0     .0      .0      .0      .0      .1      .1      .2      .3      .5    1.0 ||
|| Spring     .0     .0      .0      .0      .0      .0      .1      .1      .1      .2     .6 ||
|| Summer     .0     .0      .0      .0      .0      .1      .1      .1      .2      .3     .5 ||
|| Autumn     .0     .0      .0      .0      .0      .0      .1      .2      .2      .5     .8 ||
||                                                                              ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                        ||
|| Winter     .08        .01       .10      1.0  2177      0(0.00%)             ||
|| Spring     .03        .00       .05       .6  2018      0(0.00%)             ||
|| Summer     .07        .02       .06       .5  2078      0(0.00%)             ||
|| Autumn     .07        .00       .10       .8  2161      0(0.00%)             ||
||-----------------------------------BY MONTH-----------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%    MAX ||
|| Jan        .0     .0      .0      .0      .0      .0      .1      .2      .2      .4     .6 ||
|| Feb        .0     .0      .0      .0      .0      .0      .1      .1      .2      .4     .6 ||
|| Mar        .0     .0      .0      .0      .0      .0      .1      .1      .1      .3     .6 ||
|| Apr        .0     .0      .0      .0      .0      .0      .0      .1      .1      .2     .4 ||
|| May        .0     .0      .0      .0      .0      .0      .0      .1      .1      .2     .2 ||
|| Jun        .0     .0      .0      .0      .0      .1      .1      .1      .1      .2     .3 ||
|| Jul        .0     .0      .0      .0      .0      .1      .1      .1      .2      .2     .4 ||
|| Aug        .0     .0      .0      .0      .0      .0      .1      .1      .2      .3     .5 ||
|| Sep        .0     .0      .0      .0      .0      .0      .1      .1      .2      .4     .8 ||
|| Oct        .0     .0      .0      .0      .0      .0      .1      .2      .2      .5     .8 ||
|| Nov        .0     .0      .0      .0      .0      .1      .1      .2      .3      .6     .8 ||
|| Dec        .0     .0      .0      .0      .1      .1      .2      .3      .3      .6    1.0 ||
||                                                                              ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                        ||
|| Jan        .06        .00       .09       .6   739      0(0.00%)             ||
|| Feb        .06        .00       .08       .6   694      0(0.00%)             ||
|| Mar        .05        .00       .06       .6   598      0(0.00%)             ||
|| Apr        .03        .00       .05       .4   687      0(0.00%)             ||
|| May        .03        .00       .04       .2   733      0(0.00%)             ||
|| Jun        .08        .03       .05       .3   694      0(0.00%)             ||
|| Jul        .07        .02       .05       .4   663      0(0.00%)             ||
|| Aug        .06        .00       .07       .5   721      0(0.00%)             ||
|| Sep        .05        .00       .08       .8   720      0(0.00%)             ||
|| Oct        .07        .00       .09       .8   721      0(0.00%)             ||
|| Nov        .09        .01       .11       .8   720      0(0.00%)             ||
|| Dec        .13        .04       .12      1.0   744      0(0.00%)             ||
||-----------------------------------BY YEAR------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%    MAX ||
|| 1992       .0     .0      .0      .0      .0      .0      .1      .1      .2      .4    1.0 ||
||                                                                              ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean       Mean     Std Dev                                        ||
|| 1992       .06        .00       .08      1.0  8434      0(0.00%)             ||
||------------------------------------------------------------------------------||
   n/a - not applicable         * - no data
```

```
                         COH Summary Statistics for 1992
                         Calgary Industrial Monitoring Station
                         Units are COH units
||------------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                  ||
||-------------------------------------BY SEASON--------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .0     .0     .0     .0     .1     .2     .4     .8    1.2    2.0    3.8 ||
|| Spring     .0     .0     .0     .0     .0     .1     .2     .4     .5    1.1    1.9 ||
|| Summer     .0     .0     .0     .0     .0     .1     .2     .3     .5     .8    1.3 ||
|| Autumn     .0     .0     .0     .0     .0     .2     .4     .7    1.0    1.8    2.8 ||
||                                                                              ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                         ||
|| Winter     .35       .09        .41      3.8  2155   139(6.45%)              ||
|| Spring     .16       .02        .21      1.9  1978    25(1.26%)              ||
|| Summer     .15       .03        .16      1.3  2140     1(0.05%)              ||
|| Autumn     .28       .03        .37      2.8  2184   100(4.58%)              ||
||-------------------------------------BY MONTH---------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .0     .0     .0     .0     .1     .2     .5     .9    1.3    2.2    3.8 ||
|| Feb        .0     .0     .0     .0     .1     .2     .4     .7    1.1    1.8    2.8 ||
|| Mar        .0     .0     .0     .0     .1     .1     .3     .4     .6    1.4    1.6 ||
|| Apr        .0     .0     .0     .0     .0     .1     .2     .3     .5    1.3    1.9 ||
|| May        .0     .0     .0     .0     .0     .1     .2     .3     .4    1.0    1.4 ||
|| Jun        .0     .0     .0     .0     .0     .1     .2     .3     .3     .7    1.0 ||
|| Jul        .0     .0     .0     .0     .1     .1     .2     .3     .3     .6    1.0 ||
|| Aug        .0     .0     .0     .0     .0     .1     .2     .5     .6     .9    1.3 ||
|| Sep        .0     .0     .0     .0     .0     .1     .3     .7    1.0    1.8    2.5 ||
|| Oct        .0     .0     .0     .0     .1     .2     .4     .7     .9    1.9    2.8 ||
|| Nov        .0     .0     .0     .0     .0     .2     .4     .8    1.1    1.8    2.3 ||
|| Dec        .0     .0     .0     .0     .1     .2     .4     .8    1.2    2.1    3.0 ||
||                                                                              ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                         ||
|| Jan        .36       .08        .45      3.8   740    60(8.11%)              ||
|| Feb        .34       .11        .36      2.8   671    34(5.07%)              ||
|| Mar        .21       .04        .23      1.6   638    11(1.72%)              ||
|| Apr        .14       .01        .22      1.9   720    10(1.39%)              ||
|| May        .13       .02        .16      1.4   620     4(0.65%)              ||
|| Jun        .13       .02        .13      1.0   674     0(0.00%)              ||
|| Jul        .14       .04        .12      1.0   722     0(0.00%)              ||
|| Aug        .18       .03        .20      1.3   744     1(0.13%)              ||
|| Sep        .24       .02        .35      2.5   720    27(3.75%)              ||
|| Oct        .29       .06        .35      2.8   744    28(3.76%)              ||
|| Nov        .30       .03        .39      2.3   720    45(6.25%)              ||
|| Dec        .34       .09        .41      3.0   744    45(6.05%)              ||
||-------------------------------------BY YEAR----------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .0     .0     .0     .0     .0     .1     .3     .6     .8    1.6    3.8 ||
||                                                                              ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N   Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                         ||
|| 1992       .23       .03        .32      3.8  8457   265(3.13%)              ||
||------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                         Wind Summary for 1992
                  Calgary Industrial Monitoring Station
         ** calculation is for values greater than 1.0 COH unit **
||------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                  ||
||                            Wind Speed (km/h)                     ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N        4     0     0     0     0     0     0     0     0     4  ||
||    NNE      5     0     0     0     0     0     0     0     0     5  ||
||    NE       1     0     0     0     0     0     0     0     0     1  ||
||    ENE      3     0     0     0     0     0     0     0     0     3  ||
||    E        4     0     0     0     0     0     0     0     0     4  ||
||    ESE      9     0     0     0     0     0     0     0     0     9  ||
||    SE      11     1     0     0     0     0     0     0     0    12  ||
||    SSE     21     0     0     0     0     0     0     0     0    21  ||
||    S       33     0     0     0     0     0     0     0     0    33  ||
||    SSW     33     2     0     0     0     0     0     0     0    35  ||
||    SW      18     0     0     0     0     0     0     0     0    18  ||
||    WSW     22     0     0     0     0     0     0     0     0    22  ||
||    W       22     1     0     0     0     0     0     0     0    23  ||
||    WNW      9     1     0     0     0     0     0     0     0    10  ||
||    NW       3     0     0     0     0     0     0     0     0     3  ||
||    NNW      5     0     0     0     0     0     0     0     0     5  ||
||  TOTAL    203     5     0     0     0     0     0     0     0   208  ||
||                                                                  ||
||  CALM =    49 hours                                              ||
||  MISSING DATA =     8 hours                                      ||
||------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                  ||
||                            Wind Speed (km/h)                     ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      1.5    .0    .0    .0    .0    .0    .0    .0    .0   1.5  ||
||    NNE    1.9    .0    .0    .0    .0    .0    .0    .0    .0   1.9  ||
||    NE      .4    .0    .0    .0    .0    .0    .0    .0    .0    .4  ||
||    ENE    1.1    .0    .0    .0    .0    .0    .0    .0    .0   1.1  ||
||    E      1.5    .0    .0    .0    .0    .0    .0    .0    .0   1.5  ||
||    ESE    3.4    .0    .0    .0    .0    .0    .0    .0    .0   3.4  ||
||    SE     4.2    .4    .0    .0    .0    .0    .0    .0    .0   4.5  ||
||    SSE    7.9    .0    .0    .0    .0    .0    .0    .0    .0   7.9  ||
||    S     12.5    .0    .0    .0    .0    .0    .0    .0    .0  12.5  ||
||    SSW   12.5    .8    .0    .0    .0    .0    .0    .0    .0  13.2  ||
||    SW     6.8    .0    .0    .0    .0    .0    .0    .0    .0   6.8  ||
||    WSW    8.3    .0    .0    .0    .0    .0    .0    .0    .0   8.3  ||
||    W      8.3    .4    .0    .0    .0    .0    .0    .0    .0   8.7  ||
||    WNW    3.4    .4    .0    .0    .0    .0    .0    .0    .0   3.8  ||
||    NW     1.1    .0    .0    .0    .0    .0    .0    .0    .0   1.1  ||
||    NNW    1.9    .0    .0    .0    .0    .0    .0    .0    .0   1.9  ||
||  TOTAL   76.6   1.9    .0    .0    .0    .0    .0    .0    .0  78.5  ||
||                                                                  ||
||  CALM = 18.49%                                                   ||
||  MISSING DATA =  3.02%                                           ||
||------------------------------------------------------------------||
                        COH Summary Statistics for 1992
                        Fort Saskatchewan Monitoring Station
                        Units are COH units
||-----------------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                      ||
||-------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .0     .0     .0     .0     .0     .1     .2     .4     .6    1.1    1.5 ||
|| Spring     .0     .0     .0     .0     .0     .0     .1     .2     .2     .4     .9 ||
|| Summer     .0     .0     .0     .0     .0     .0     .1     .1     .1     .2     .4 ||
|| Autumn     .0     .0     .0     .0     .0     .1     .1     .3     .5     .8    1.5 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range    N   Number of Values > 1.0 COH unit ||
||          Mean       Mean      Std Dev                                             ||
|| Winter     .17        .03        .20      1.5  1408    16(1.14%)                  ||
|| Spring     .06        .00        .09       .9  2181     0(0.00%)                  ||
|| Summer     .04        .00        .05       .4  2104     0(0.00%)                  ||
|| Autumn     .11        .00        .17      1.5  2166     4(0.18%)                  ||
||-------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .0     .0     .0     .0     .0     .1     .3     .5     .7    1.2    1.5 ||
|| Feb        .0     .0     .0     .0     .1     .1     .2     .3     .4     .6     .7 ||
|| Mar        .0     .0     .0     .0     .0     .1     .1     .3     .4     .6     .9 ||
|| Apr        .0     .0     .0     .0     .0     .0     .1     .1     .1     .3     .5 ||
|| May        .0     .0     .0     .0     .0     .0     .1     .1     .1     .2     .5 ||
|| Jun        .0     .0     .0     .0     .0     .1     .1     .1     .1     .1     .3 ||
|| Jul        .0     .0     .0     .0     .0     .0     .1     .1     .1     .2     .4 ||
|| Aug        .0     .0     .0     .0     .0     .1     .1     .1     .1     .2     .3 ||
|| Sep        .0     .0     .0     .0     .0     .0     .1     .1     .3     .7    1.5 ||
|| Oct        .0     .0     .0     .0     .0     .1     .2     .3     .5     .7    1.2 ||
|| Nov        .0     .0     .0     .0     .0     .1     .2     .4     .6    1.0    1.2 ||
|| Dec        *      *      *      *      *      *      *      *      *      *      *  ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range    N   Number of Values > 1.0 COH unit ||
||          Mean       Mean      Std Dev                                             ||
|| Jan        .21        .02        .25      1.5   736    16(2.17%)                  ||
|| Feb        .14        .04        .13       .7   672     0(0.00%)                  ||
|| Mar        .11        .01        .12       .9   718     0(0.00%)                  ||
|| Apr        .05        .00        .06       .5   719     0(0.00%)                  ||
|| May        .04        .00        .05       .5   744     0(0.00%)                  ||
|| Jun        .05        .01        .04       .3   719     0(0.00%)                  ||
|| Jul        .03        .00        .05       .4   737     0(0.00%)                  ||
|| Aug        .06        .01        .05       .3   648     0(0.00%)                  ||
|| Sep        .06        .00        .13      1.5   717     2(0.28%)                  ||
|| Oct        .13        .01        .16      1.2   744     1(0.13%)                  ||
|| Nov        .16        .01        .20      1.2   705     1(0.14%)                  ||
|| Dec         *          *          *        *     *              *                 ||
||--------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .0     .0     .0     .0     .0     .0     .1     .2     .4     .7    1.5 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range    N   Number of Values > 1.0 COH unit ||
||          Mean       Mean      Std Dev                                             ||
|| 1992       .09        .00        .14      1.5  7859    20(0.25%)                  ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                    Wind Summary for 1992
             Fort Saskatchewan Monitoring Station
      ** calculation is for values greater than 1.0 COH unit **
||------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                  ||
||                       Wind Speed (km/h)                          ||
||    Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N         0     0     0     0     0     0     0     0     0     0  ||
||    NNE       1     0     0     0     0     0     0     0     0     1  ||
||    NE        0     0     0     0     0     0     0     0     0     0  ||
||    ENE       0     0     0     0     0     0     0     0     0     0  ||
||    E         1     0     0     0     0     0     0     0     0     1  ||
||    ESE       0     0     0     0     0     0     0     0     0     0  ||
||    SE        1     0     0     0     0     0     0     0     0     1  ||
||    SSE       0     0     0     0     0     0     0     0     0     0  ||
||    S         2     0     0     0     0     0     0     0     0     2  ||
||    SSW       3     1     0     0     0     0     0     0     0     4  ||
||    SW        8     1     0     0     0     0     0     0     0     9  ||
||    WSW       1     0     0     0     0     0     0     0     0     1  ||
||    W         1     0     0     0     0     0     0     0     0     1  ||
||    WNW       0     0     0     0     0     0     0     0     0     0  ||
||    NW        0     0     0     0     0     0     0     0     0     0  ||
||    NNW       0     0     0     0     0     0     0     0     0     0  ||
||  TOTAL      18     2     0     0     0     0     0     0     0    20  ||
||                                                                  ||
||  CALM =      0 hours                                             ||
||  MISSING DATA =      0 hours                                     ||
||------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                  ||
||                       Wind Speed (km/h)                          ||
||    Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N        .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNE     5.0    .0    .0    .0    .0    .0    .0    .0    .0   5.0  ||
||    NE       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ENE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    E       5.0    .0    .0    .0    .0    .0    .0    .0    .0   5.0  ||
||    ESE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SE      5.0    .0    .0    .0    .0    .0    .0    .0    .0   5.0  ||
||    SSE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    S      10.0    .0    .0    .0    .0    .0    .0    .0    .0  10.0  ||
||    SSW    15.0   5.0    .0    .0    .0    .0    .0    .0    .0  20.0  ||
||    SW     40.0   5.0    .0    .0    .0    .0    .0    .0    .0  45.0  ||
||    WSW     5.0    .0    .0    .0    .0    .0    .0    .0    .0   5.0  ||
||    W       5.0    .0    .0    .0    .0    .0    .0    .0    .0   5.0  ||
||    WNW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NW       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||  TOTAL    90.0  10.0    .0    .0    .0    .0    .0    .0    .0 100.0  ||
||                                                                  ||
||  CALM =    .00%                                                  ||
||  MISSING DATA =    .00%                                          ||
||------------------------------------------------------------------||
                    COH Summary Statistics for 1992
                    Fort McMurray Monitoring Station
                    Units are COH units
||---------------------------------------------------------------------------------||
|| Ambient regulation = 90% of values per month < 1.0 COH unit                     ||
||-------------------------------------BY SEASON-----------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .0     .0     .0     .0     .0     .0     .1     .2     .3     .6    1.5 ||
|| Spring     .0     .0     .0     .0     .0     .0     .1     .1     .1     .3     .6 ||
|| Summer     .0     .0     .0     .0     .0     .1     .1     .1     .1     .2     .4 ||
|| Autumn     .0     .0     .0     .0     .0     .0     .1     .2     .3     .6    1.3 ||
||                                                                                 ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N    Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                            ||
|| Winter     .09       .00        .13      1.5  1875     1(0.05%)                 ||
|| Spring     .04       .00        .06       .6  2005     0(0.00%)                 ||
|| Summer     .07       .02        .05       .4   878     0(0.00%)                 ||
|| Autumn     .09       .00        .13      1.3  1318     1(0.08%)                 ||
||-------------------------------------BY MONTH------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .0     .0     .0     .0     .0     .0     .1     .3     .4     .6     .8 ||
|| Feb        .0     .0     .0     .0     .0     .1     .1     .2     .3     .8    1.0 ||
|| Mar        .0     .0     .0     .0     .0     .0     .0     .1     .2     .5     .6 ||
|| Apr        .0     .0     .0     .0     .0     .0     .1     .1     .1     .2     .4 ||
|| May        .0     .0     .0     .0     .0     .0     .1     .1     .1     .2     .4 ||
|| Jun        .0     .0     .0     .0     .0     .1     .1     .1     .2     .3     .4 ||
|| Jul        .0     .0     .0     .0     .0     .1     .1     .1     .1     .2     .4 ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *  ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *  ||
|| Oct        .0     .0     .0     .0     .0     .0     .1     .2     .4     .7    1.3 ||
|| Nov        .0     .0     .0     .0     .0     .0     .1     .2     .3     .5     .8 ||
|| Dec        .0     .0     .0     .0     .0     .0     .1     .2     .3     .6    1.5 ||
||                                                                                 ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N    Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                            ||
|| Jan        .09       .00        .14       .8   503     0(0.00%)                 ||
|| Feb        .09       .01        .13      1.0   653     0(0.00%)                 ||
|| Mar        .04       .00        .08       .6   542     0(0.00%)                 ||
|| Apr        .03       .00        .04       .4   720     0(0.00%)                 ||
|| May        .05       .01        .05       .4   743     0(0.00%)                 ||
|| Jun        .07       .03        .05       .4   686     0(0.00%)                 ||
|| Jul        .07       .03        .04       .4   192     0(0.00%)                 ||
|| Aug        *         *          *         *    *                 *              ||
|| Sep        *         *          *         *    *                 *              ||
|| Oct        .09       .00        .14      1.3   632     1(0.16%)                 ||
|| Nov        .08       .00        .12       .8   686     0(0.00%)                 ||
|| Dec        .08       .00        .12      1.5   719     1(0.14%)                 ||
||-------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .0     .0     .0     .0     .0     .0     .1     .2     .2     .5    1.5 ||
||                                                                                 ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N    Number of Values > 1.0 COH unit ||
||           Mean      Mean     Std Dev                                            ||
|| 1992       .07       .00        .10      1.5  6076     2(0.03%)                 ||
||---------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                            Wind Summary for 1992
                    Fort McMurray Monitoring Station (FMMU)
              ** calculation is for values greater than 1.0 COH unit **
||-----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                       ||
||                              Wind Speed (km/h)                        ||
||    Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N         0     0     0     0     0     0     0     0     0     0  ||
||    NNE       0     0     0     0     0     0     0     0     0     0  ||
||    NE        0     0     0     0     0     0     0     0     0     0  ||
||    ENE       0     0     0     0     0     0     0     0     0     0  ||
||    E         0     0     0     0     0     0     0     0     0     0  ||
||    ESE       0     0     0     0     0     0     0     0     0     0  ||
||    SE        0     0     0     0     0     0     0     0     0     0  ||
||    SSE       0     0     0     0     0     0     0     0     0     0  ||
||    S         1     0     0     0     0     0     0     0     0     1  ||
||    SSW       0     0     0     0     0     0     0     0     0     0  ||
||    SW        0     0     0     0     0     0     0     0     0     0  ||
||    WSW       0     0     0     0     0     0     0     0     0     0  ||
||    W         0     0     0     0     0     0     0     0     0     0  ||
||    WNW       0     0     0     0     0     0     0     0     0     0  ||
||    NW        0     0     0     0     0     0     0     0     0     0  ||
||    NNW       0     0     0     0     0     0     0     0     0     0  ||
||  TOTAL       1     0     0     0     0     0     0     0     0     1  ||
||                                                                       ||
||  CALM =      1 hours                                                  ||
||  MISSING DATA =      0 hours                                          ||
||-----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)     ||
||                                                                       ||
||                              Wind Speed (km/h)                        ||
||    Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N        .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NE       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ENE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    E        .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ESE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SE       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SSE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    S      50.0    .0    .0    .0    .0    .0    .0    .0    .0  50.0  ||
||    SSW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SW       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    WSW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    W        .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    WNW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NW       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||  TOTAL    50.0    .0    .0    .0    .0    .0    .0    .0    .0  50.0  ||
||                                                                       ||
||  CALM = 50.00%                                                        ||
||  MISSING DATA =   .00%                                                ||
||-----------------------------------------------------------------------||
```

Annual Average Concentration
Year: 1992
Pollutant: COH [COH units]

Year	EDMU	ERMU	EIMU	CDMU	CRMU	CIMU	Fort Sask.	Fort McMurray
1976	0.19	0.11	0.04	0.16	0.10	0.21	*	*
1977	0.20	0.12	0.09	0.19	0.11	0.23	*	*
1978	0.20	0.15	0.13	0.24	0.10	0.22	*	*
1979	0.27	0.23	0.20	0.25	0.10	0.26	*	0.04
1980	0.30	0.28	0.23	0.30	0.11	0.29	*	0.08
1981	0.37	0.29	0.22	0.41	0.14	0.33	b	0.10
1982	0.30	0.25	0.09	0.40	0.16	0.33	0.15	0.06
1983	0.25	0.24	0.17	0.33	0.11	0.31	0.12	0.03
1984	0.23	0.22	0.24	0.23	0.12	0.29	0.13	0.03
1985	0.23	0.23	0.22	0.27	0.10	0.23	0.13	0.06
1986	0.26	0.24	0.18	0.30	0.11	0.23	0.13	0.05
1987	0.23	0.27	0.17	0.32	0.11	0.28	0.14	0.07
1988	0.19	0.23	0.21	0.26	0.08	0.30	0.10	0.07
1989	0.21	0.23	0.24	0.25	0.08	0.29	0.10	0.07
1990	0.20	0.23	0.22	0.22	0.07	0.24	0.08	0.09
1991	0.22	0.24	0.23	0.22	0.05	0.23	0.10	0.05
1992	0.21	0.23	0.23	0.18	0.06	0.23	0.09	0.07

a 50% to 75% of data available
b less than 50% of data available

```
                         H2S Summary Statistics for 1992
                         Edmonton East Monitoring Station
                         Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .010 PPM                                      ||
|| Ambient 24-hour average regulation =   .003 PPM                                     ||
||-------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .000    .000    .000    .001    .002    .003    .003    .006    .035 ||
|| Spring   .000    .000    .000    .000    .000    .000    .001    .001    .002    .003    .024 ||
|| Summer   .000    .000    .000    .000    .000    .000    .001    .001    .002    .004    .008 ||
|| Autumn   .000    .000    .000    .000    .000    .000    .001    .001    .002    .004    .018 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour      24 hour         ||
|| Winter    .001       .000        .002      .035 2042     9(0.44%)     0(0.00%)        ||
|| Spring    .000       .000        .001      .024 2168     1(0.05%)     0(0.00%)        ||
|| Summer    .000       .000        .001      .008 1517     0(0.00%)     0(0.00%)        ||
|| Autumn    .000       .000        .001      .018 2174     1(0.05%)     0(0.00%)        ||
||-------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .000    .000    .000    .001    .002    .003    .003    .006    .013 ||
|| Feb      .000    .000    .000    .000    .000    .001    .002    .003    .004    .006    .013 ||
|| Mar      .000    .000    .000    .000    .000    .000    .001    .001    .002    .003    .005 ||
|| Apr      .000    .000    .000    .000    .000    .000    .001    .001    .002    .004    .006 ||
|| May      .000    .000    .000    .000    .000    .000    .000    .001    .001    .003    .024 ||
|| Jun      .000    .000    .000    .000    .000    .000    .001    .001    .002    .003    .004 ||
|| Jul      .000    .000    .000    .000    .000    .000    .001    .001    .002    .004    .007 ||
|| Aug      .000    .000    .000    .000    .000    .000    .001    .001    .002    .004    .008 ||
|| Sep      .000    .000    .000    .000    .000    .000    .000    .001    .002    .005    .007 ||
|| Oct      .000    .000    .000    .000    .000    .000    .001    .002    .003    .005    .018 ||
|| Nov      .000    .000    .000    .000    .000    .000    .001    .001    .002    .003    .007 ||
|| Dec      .000    .000    .000    .000    .000    .000    .001    .002    .003    .007    .035 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour      24 hour         ||
|| Jan       .001       .000        .001      .013  725     2(0.28%)     0(0.00%)        ||
|| Feb       .002       .000        .001      .013  587     2(0.34%)     0(0.00%)        ||
|| Mar       .000       .000        .001      .005  736     0(0.00%)     0(0.00%)        ||
|| Apr       .001       .000        .001      .006  712     0(0.00%)     0(0.00%)        ||
|| May       .000       .000        .001      .024  720     1(0.14%)     0(0.00%)        ||
|| Jun       .000       .000        .001      .004  257     0(0.00%)     0(0.00%)        ||
|| Jul       .000       .000        .001      .007  519     0(0.00%)     0(0.00%)        ||
|| Aug       .001       .000        .001      .008  741     0(0.00%)     0(0.00%)        ||
|| Sep       .000       .000        .001      .007  717     0(0.00%)     0(0.00%)        ||
|| Oct       .001       .000        .001      .018  744     1(0.13%)     0(0.00%)        ||
|| Nov       .000       .000        .001      .007  713     0(0.00%)     0(0.00%)        ||
|| Dec       .001       .000        .002      .035  730     5(0.68%)     0(0.00%)        ||
||--------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .000    .000    .000    .000    .000    .001    .002    .003    .005    .035 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour      24 hour         ||
|| 1992      .001       .000        .001      .035 7901    11(0.14%)     0(0.00%)        ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                         Wind Summary for 1992
                   Edmonton East Monitoring Station
  ** calculation is for exceedances of the 1-hour regulation for H2S **
||--------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                    ||
||                           Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||    N        0     0     0     0     0     0     0     0     0     0 ||
||    NNE      1     1     0     0     0     0     0     0     0     2 ||
||    NE       2     0     0     0     0     0     0     0     0     2 ||
||    ENE      0     0     0     0     0     1     0     0     0     1 ||
||    E        0     0     0     0     0     0     0     0     0     0 ||
||    ESE      0     0     0     0     0     0     0     0     0     0 ||
||    SE       0     0     0     0     0     0     0     0     0     0 ||
||    SSE      1     2     1     0     0     0     0     0     0     4 ||
||    S        0     1     0     0     0     0     0     0     0     1 ||
||    SSW      0     0     1     0     0     0     0     0     0     1 ||
||    SW       0     0     0     0     0     0     0     0     0     0 ||
||    WSW      0     0     0     0     0     0     0     0     0     0 ||
||    W        0     0     0     0     0     0     0     0     0     0 ||
||    WNW      0     0     0     0     0     0     0     0     0     0 ||
||    NW       0     0     0     0     0     0     0     0     0     0 ||
||    NNW      0     0     0     0     0     0     0     0     0     0 ||
||  TOTAL      4     4     2     0     0     1     0     0     0    11 ||
||                                                                    ||
||  CALM =      0 hours                                               ||
||  MISSING DATA =      0 hours                                       ||
||--------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                    ||
||                           Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||    N       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    NNE    9.1   9.1    .0    .0    .0    .0    .0    .0    .0  18.2 ||
||    NE    18.2    .0    .0    .0    .0    .0    .0    .0    .0  18.2 ||
||    ENE     .0    .0    .0    .0    .0   9.1    .0    .0    .0   9.1 ||
||    E       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    ESE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    SE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    SSE    9.1  18.2   9.1    .0    .0    .0    .0    .0    .0  36.4 ||
||    S       .0   9.1    .0    .0    .0    .0    .0    .0    .0   9.1 ||
||    SSW     .0    .0   9.1    .0    .0    .0    .0    .0    .0   9.1 ||
||    SW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    WSW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    W       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    WNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    NW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    NNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||  TOTAL   36.4  36.4  18.2    .0    .0   9.1    .0    .0    .0 100.0 ||
||                                                                    ||
||  CALM =   .00%                                                     ||
||  MISSING DATA =   .00%                                             ||
||--------------------------------------------------------------------||
                         H2S Summary Statistics for 1992
                         Calgary Industrial Monitoring Station
                         Units are PPM (parts per million)
||-------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .010 PPM                                ||
|| Ambient 24-hour average regulation =   .003 PPM                               ||
||------------------------------------BY SEASON----------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .001   .001   .002   .003   .004   .007   .012 ||
|| Spring   .000   .000   .000   .000   .001   .001   .001   .002   .003   .004   .009 ||
|| Summer   .000   .000   .000   .000   .000   .001   .001   .002   .002   .003   .008 ||
|| Autumn   .000   .000   .000   .000   .000   .001   .002   .003   .004   .006   .011 ||
||                                                                               ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean       Mean     Std Dev                   1 hour      24 hour   ||
|| Winter    .002       .001        .001    .012 2165     2(0.09%)    0(0.00%)   ||
|| Spring    .001       .000        .001    .009 2053     0(0.00%)    0(0.00%)   ||
|| Summer    .001       .000        .001    .008 2086     0(0.00%)    0(0.00%)   ||
|| Autumn    .001       .000        .001    .011 1875     2(0.11%)    0(0.00%)   ||
||------------------------------------BY MONTH-----------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .001   .001   .003   .004   .005   .008   .012 ||
|| Feb      .000   .000   .000   .000   .001   .001   .002   .003   .004   .006   .009 ||
|| Mar      .000   .000   .000   .000   .001   .001   .002   .002   .003   .004   .008 ||
|| Apr      .000   .000   .000   .000   .001   .001   .001   .002   .003   .004   .009 ||
|| May      .000   .000   .000   .000   .000   .001   .001   .002   .002   .004   .004 ||
|| Jun      .000   .000   .000   .000   .000   .001   .001   .002   .002   .003   .007 ||
|| Jul      .000   .000   .000   .000   .001   .001   .001   .002   .002   .003   .004 ||
|| Aug      .000   .000   .000   .000   .000   .001   .001   .002   .002   .003   .008 ||
|| Sep      .000   .000   .000   .000   .000   .001   .001   .002   .004   .007   .009 ||
|| Oct      .000   .000   .000   .000   .000   .001   .001   .002   .003   .006   .011 ||
|| Nov      .000   .000   .000   .000   .001   .001   .002   .003   .004   .006   .009 ||
|| Dec      .000   .000   .000   .000   .001   .001   .002   .003   .004   .005   .009 ||
||                                                                               ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean       Mean     Std Dev                   1 hour      24 hour   ||
|| Jan       .002       .001        .002    .012  735     2(0.27%)    0(0.00%)   ||
|| Feb       .002       .001        .001    .009  689     0(0.00%)    0(0.00%)   ||
|| Mar       .001       .001        .001    .008  738     0(0.00%)    0(0.00%)   ||
|| Apr       .001       .000        .001    .009  711     0(0.00%)    0(0.00%)   ||
|| May       .001       .000        .001    .004  604     0(0.00%)    0(0.00%)   ||
|| Jun       .001       .000        .001    .007  669     0(0.00%)    0(0.00%)   ||
|| Jul       .001       .001        .001    .004  706     0(0.00%)    0(0.00%)   ||
|| Aug       .001       .000        .001    .008  711     0(0.00%)    0(0.00%)   ||
|| Sep       .001       .000        .001    .009  423     0(0.00%)    0(0.00%)   ||
|| Oct       .001       .000        .001    .011  739     2(0.27%)    0(0.00%)   ||
|| Nov       .001       .000        .001    .009  713     0(0.00%)    0(0.00%)   ||
|| Dec       .001       .001        .001    .009  741     0(0.00%)    0(0.00%)   ||
||------------------------------------BY YEAR------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .000   .001   .001   .002   .003   .005   .012 ||
||                                                                               ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean       Mean     Std Dev                   1 hour      24 hour   ||
|| 1992      .001       .000        .001    .012 8179     4(0.05%)    0(0.00%)   ||
||-------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                      Wind Summary for 1992
                 Calgary Industrial Monitoring Station
  ** calculation is for exceedances of the 1-hour regulation for H2S **
||-------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                   ||
||                         Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||    N        1     0     0     0     0     0     0     0     0     1 ||
||    NNE      0     0     0     0     0     0     0     0     0     0 ||
||    NE       0     0     0     0     0     0     0     0     0     0 ||
||    ENE      0     0     0     0     0     0     0     0     0     0 ||
||    E        0     0     0     0     0     0     0     0     0     0 ||
||    ESE      0     0     0     0     0     0     0     0     0     0 ||
||    SE       0     0     0     0     0     0     0     0     0     0 ||
||    SSE      0     0     0     0     0     0     0     0     0     0 ||
||    S        0     0     0     0     0     0     0     0     0     0 ||
||    SSW      0     0     0     0     0     0     0     0     0     0 ||
||    SW       1     0     0     0     0     0     0     0     0     1 ||
||    WSW      0     0     0     0     0     0     0     0     0     0 ||
||    W        0     0     0     0     0     0     0     0     0     0 ||
||    WNW      1     0     0     0     0     0     0     0     0     1 ||
||    NW       0     0     0     0     0     0     0     0     0     0 ||
||    NNW      0     0     0     0     0     0     0     0     0     0 ||
||  TOTAL      3     0     0     0     0     0     0     0     0     3 ||
||                                                                   ||
||  CALM =      1 hours                                              ||
||  MISSING DATA =      0 hours                                      ||
||-------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)   ||
||                                                                   ||
||                         Wind Speed (km/h)                         ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||    N     25.0    .0    .0    .0    .0    .0    .0    .0    .0  25.0 ||
||    NNE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    NE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    ENE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    E       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    ESE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    SE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    SSE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    S       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    SSW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    SW    25.0    .0    .0    .0    .0    .0    .0    .0    .0  25.0 ||
||    WSW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    W       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    WNW   25.0    .0    .0    .0    .0    .0    .0    .0    .0  25.0 ||
||    NW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||    NNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0 ||
||  TOTAL   75.0    .0    .0    .0    .0    .0    .0    .0    .0  75.0 ||
||                                                                   ||
||  CALM = 25.00%                                                    ||
||  MISSING DATA =   .00%                                            ||
||-------------------------------------------------------------------||
                         H2S Summary Statistics for 1992
                         Fort Saskatchewan Monitoring Station
                         Units are PPM (parts per million)
||--------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .010 PPM                                 ||
|| Ambient 24-hour average regulation =   .003 PPM                                ||
||-----------------------------------BY SEASON------------------------------------||
|| SEASON   MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter  .000   .000   .000   .000   .000   .000   .001   .003   .004   .008   .035 ||
|| Spring  .000   .000   .000   .000   .000   .000   .001   .002   .003   .005   .020 ||
|| Summer  .000   .000   .000   .000   .000   .000   .001   .002   .002   .004   .006 ||
|| Autumn  .000   .000   .000   .000   .000   .000   .001   .001   .002   .002   .006 ||
||                                                                                ||
|| SEASON Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances  ||
||          Mean       Mean     Std Dev                     1 hour      24 hour   ||
|| Winter   .001       .000        .002     .035 1418    11(0.78%)     2(3.39%)   ||
|| Spring   .001       .000        .001     .020 2175     2(0.09%)     0(0.00%)   ||
|| Summer   .001       .000        .001     .006 1938     0(0.00%)     0(0.00%)   ||
|| Autumn   .001       .000        .001     .006 2145     0(0.00%)     0(0.00%)   ||
||-----------------------------------BY MONTH-------------------------------------||
|| MONTH    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan     .000   .000   .000   .000   .000   .001   .002   .003   .003   .006   .014 ||
|| Feb     .000   .000   .000   .000   .000   .000   .001   .003   .004   .011   .035 ||
|| Mar     .000   .000   .000   .000   .000   .001   .002   .003   .004   .007   .020 ||
|| Apr     .000   .000   .000   .000   .000   .000   .001   .002   .003   .005   .014 ||
|| May     .000   .000   .000   .000   .000   .001   .001   .001   .002   .002   .005 ||
|| Jun     .000   .000   .000   .000   .000   .001   .002   .002   .003   .004   .006 ||
|| Jul     .000   .000   .000   .000   .000   .001   .001   .002   .002   .004   .004 ||
|| Aug     .000   .000   .000   .000   .000   .000   .001   .001   .002   .003   .004 ||
|| Sep     .000   .000   .000   .000   .000   .000   .001   .001   .002   .002   .004 ||
|| Oct     .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .003 ||
|| Nov     .000   .000   .000   .000   .000   .000   .001   .001   .002   .003   .006 ||
|| Dec      *      *      *      *      *      *      *      *      *      *      *   ||
||                                                                                ||
|| MONTH  Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances  ||
||          Mean       Mean     Std Dev                     1 hour      24 hour   ||
|| Jan      .001       .000        .001     .014  729     2(0.27%)     1(3.33%)   ||
|| Feb      .001       .000        .003     .035  689     9(1.31%)     1(3.45%)   ||
|| Mar      .001       .000        .002     .020  732     1(0.14%)     0(0.00%)   ||
|| Apr      .001       .000        .001     .014  706     1(0.14%)     0(0.00%)   ||
|| May      .001       .000        .001     .005  737     0(0.00%)     0(0.00%)   ||
|| Jun      .001       .000        .001     .006  718     0(0.00%)     0(0.00%)   ||
|| Jul      .001       .000        .001     .004  571     0(0.00%)     0(0.00%)   ||
|| Aug      .000       .000        .001     .004  649     0(0.00%)     0(0.00%)   ||
|| Sep      .000       .000        .001     .004  681     0(0.00%)     0(0.00%)   ||
|| Oct      .000       .000        .001     .003  744     0(0.00%)     0(0.00%)   ||
|| Nov      .001       .000        .001     .006  720     0(0.00%)     0(0.00%)   ||
|| Dec       *          *           *         *     *                  *          ||
||------------------------------------BY YEAR-------------------------------------||
|| YEAR     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992    .000   .000   .000   .000   .000   .000   .001   .002   .003   .005   .035 ||
||                                                                                ||
|| YEAR   Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances  ||
||          Mean       Mean     Std Dev                     1 hour      24 hour   ||
|| 1992     .001       .000        .001     .035 7676    13(0.17%)     2(0.63%)   ||
||--------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                          Wind Summary for 1992
                   Fort Saskatchewan Monitoring Station
  ** calculation is for exceedances of the 1-hour regulation for H2S **
||-----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                       ||
||                            Wind Speed (km/h)                          ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N        1     1     0     0     0     0     0     0     0     2  ||
||    NNE      2     0     0     0     0     0     0     0     0     2  ||
||    NE       0     0     0     0     0     0     0     0     0     0  ||
||    ENE      1     0     0     0     0     0     0     0     0     1  ||
||    E        0     0     0     0     0     0     0     0     0     0  ||
||    ESE      0     0     0     0     0     0     0     0     0     0  ||
||    SE       0     0     0     0     0     0     0     0     0     0  ||
||    SSE      0     0     0     0     0     0     0     0     0     0  ||
||    S        0     0     0     0     0     0     0     0     0     0  ||
||    SSW      2     0     0     0     0     0     0     0     0     2  ||
||    SW       1     0     0     0     0     0     0     0     0     1  ||
||    WSW      2     0     0     0     0     0     0     0     0     2  ||
||    W        0     0     0     0     0     0     0     0     0     0  ||
||    WNW      0     0     0     0     0     0     0     0     0     0  ||
||    NW       0     0     0     0     0     0     0     0     0     0  ||
||    NNW      2     0     1     0     0     0     0     0     0     3  ||
||  TOTAL     11     1     1     0     0     0     0     0     0    13  ||
||                                                                       ||
||  CALM =      0 hours                                                  ||
||  MISSING DATA =      0 hours                                          ||
||-----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                       ||
||                            Wind Speed (km/h)                          ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      7.7   7.7    .0    .0    .0    .0    .0    .0    .0  15.4  ||
||    NNE   15.4    .0    .0    .0    .0    .0    .0    .0    .0  15.4  ||
||    NE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ENE    7.7    .0    .0    .0    .0    .0    .0    .0    .0   7.7  ||
||    E       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ESE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SSE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    S       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SSW   15.4    .0    .0    .0    .0    .0    .0    .0    .0  15.4  ||
||    SW     7.7    .0    .0    .0    .0    .0    .0    .0    .0   7.7  ||
||    WSW   15.4    .0    .0    .0    .0    .0    .0    .0    .0  15.4  ||
||    W       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    WNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNW   15.4    .0   7.7    .0    .0    .0    .0    .0    .0  23.1  ||
||  TOTAL   84.6   7.7   7.7    .0    .0    .0    .0    .0    .0 100.0  ||
||                                                                       ||
||  CALM =    .00%                                                       ||
||  MISSING DATA =   .00%                                                ||
||-----------------------------------------------------------------------||
                         Wind Summary for 1992
                   Fort Saskatchewan Monitoring Station
  ** calculation is for exceedances of the 24-hour regulation for H2S **
||-----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours)  ||
||                                                                       ||
||                         Wind Speed (km/h)                             ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL   ||
||    N        6     0     0     0     0     0     0     0     0     6   ||
||    NNE      3     0     0     0     0     0     0     0     0     3   ||
||    NE       3     0     0     0     0     0     0     0     0     3   ||
||    ENE      2     0     0     0     0     0     0     0     0     2   ||
||    E        1     3     0     0     0     0     0     0     0     4   ||
||    ESE      3     0     0     0     0     0     0     0     0     3   ||
||    SE       2     1     0     0     0     0     0     0     0     3   ||
||    SSE      2     0     0     0     0     0     0     0     0     2   ||
||    S        1     1     0     0     0     0     0     0     0     2   ||
||    SSW      5     3     0     0     0     0     0     0     0     8   ||
||    SW       2     5     1     0     0     0     0     0     0     8   ||
||    WSW      2     0     0     0     0     0     0     0     0     2   ||
||    W        0     0     0     0     0     0     0     0     0     0   ||
||    WNW      0     0     0     0     0     0     0     0     0     0   ||
||    NW       0     0     0     0     0     0     0     0     0     0   ||
||    NNW      2     0     0     0     0     0     0     0     0     2   ||
||  TOTAL     34    13     1     0     0     0     0     0     0    48   ||
||                                                                       ||
||  CALM =      0 hours                                                  ||
||  MISSING DATA =     0 hours                                           ||
||-----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)     ||
||                                                                       ||
||                         Wind Speed (km/h)                             ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL   ||
||    N     12.5    .0    .0    .0    .0    .0    .0    .0    .0  12.5   ||
||    NNE    6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3   ||
||    NE     6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3   ||
||    ENE    4.2    .0    .0    .0    .0    .0    .0    .0    .0   4.2   ||
||    E      2.1   6.3    .0    .0    .0    .0    .0    .0    .0   8.3   ||
||    ESE    6.3    .0    .0    .0    .0    .0    .0    .0    .0   6.3   ||
||    SE     4.2   2.1    .0    .0    .0    .0    .0    .0    .0   6.3   ||
||    SSE    4.2    .0    .0    .0    .0    .0    .0    .0    .0   4.2   ||
||    S      2.1   2.1    .0    .0    .0    .0    .0    .0    .0   4.2   ||
||    SSW   10.4   6.3    .0    .0    .0    .0    .0    .0    .0  16.7   ||
||    SW     4.2  10.4   2.1    .0    .0    .0    .0    .0    .0  16.7   ||
||    WSW    4.2    .0    .0    .0    .0    .0    .0    .0    .0   4.2   ||
||    W       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0   ||
||    WNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0   ||
||    NW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0   ||
||    NNW    4.2    .0    .0    .0    .0    .0    .0    .0    .0   4.2   ||
||  TOTAL   70.8  27.1   2.1    .0    .0    .0    .0    .0    .0 100.0   ||
||                                                                       ||
||  CALM =    .00%                                                       ||
||  MISSING DATA =   .00%                                                ||
||-----------------------------------------------------------------------||
                             H2S Summary Statistics for 1992
                             Fort McMurray Monitoring Station
                             Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .010 PPM                                      ||
|| Ambient 24-hour average regulation =    .003 PPM                                    ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .000   .001   .001   .001   .001   .002   .004 ||
|| Spring   .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .003 ||
|| Summer   .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .003 ||
|| Autumn   .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .005 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||          Mean      Mean     Std Dev                     1 hour      24 hour         ||
|| Winter    .001      .000        .001     .004 2175     0(0.00%)     0(0.00%)        ||
|| Spring    .000      .000        .000     .003 1998     0(0.00%)     0(0.00%)        ||
|| Summer    .000      .000        .000     .003  909     0(0.00%)     0(0.00%)        ||
|| Autumn    .000      .000        .001     .005 1303     0(0.00%)     0(0.00%)        ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .000   .001   .001   .001   .001   .003   .003 ||
|| Feb      .000   .000   .000   .000   .000   .001   .001   .001   .001   .002   .004 ||
|| Mar      .000   .000   .000   .000   .000   .001   .001   .001   .001   .001   .002 ||
|| Apr      .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .003 ||
|| May      .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .002 ||
|| Jun      .000   .000   .000   .000   .000   .000   .000   .000   .001   .001   .001 ||
|| Jul      .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .003 ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *  ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *  ||
|| Oct      .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .002 ||
|| Nov      .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .005 ||
|| Dec      .000   .000   .000   .000   .000   .001   .001   .001   .001   .002   .004 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||          Mean      Mean     Std Dev                     1 hour      24 hour         ||
|| Jan       .001      .000        .001     .003  740     0(0.00%)     0(0.00%)        ||
|| Feb       .001      .000        .000     .004  695     0(0.00%)     0(0.00%)        ||
|| Mar       .001      .000        .000     .002  540     0(0.00%)     0(0.00%)        ||
|| Apr       .000      .000        .000     .003  714     0(0.00%)     0(0.00%)        ||
|| May       .000      .000        .000     .002  744     0(0.00%)     0(0.00%)        ||
|| Jun       .000      .000        .000     .001  717     0(0.00%)     0(0.00%)        ||
|| Jul       .000      .000        .000     .003  192     0(0.00%)     0(0.00%)        ||
|| Aug        *         *           *        *     *                *                  ||
|| Sep        *         *           *        *     *                *                  ||
|| Oct       .000      .000        .001     .002  586     0(0.00%)     0(0.00%)        ||
|| Nov       .000      .000        .001     .005  717     0(0.00%)     0(0.00%)        ||
|| Dec       .001      .000        .001     .004  740     0(0.00%)     0(0.00%)        ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .005 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||          Mean      Mean     Std Dev                     1 hour      24 hour         ||
|| 1992      .000      .000        .000     .005 6385     0(0.00%)     0(0.00%)        ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                          H2S Summary Statistics for 1992
                          Fort MacKay Monitoring Station
                          Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .010 PPM                                      ||
|| Ambient 24-hour average regulation =   .003 PPM                                     ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .000   .001   .001   .001   .001   .002   .004 ||
|| Spring   .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .004 ||
|| Summer   .000   .000   .000   .000   .000   .000   .000   .001   .001   .002   .004 ||
|| Autumn   .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .004 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                   1 hour      24 hour        ||
|| Winter    .001       .000         .001     .004 2173     0(0.00%)    0(0.00%)       ||
|| Spring    .000       .000         .000     .004 2179     0(0.00%)    0(0.00%)       ||
|| Summer    .000       .000         .000     .004 2193     0(0.00%)    0(0.00%)       ||
|| Autumn    .000       .000         .000     .004 2173     0(0.00%)    0(0.00%)       ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .000   .001   .001   .001   .001   .002   .003 ||
|| Feb      .000   .000   .000   .000   .000   .001   .001   .001   .001   .002   .003 ||
|| Mar      .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .004 ||
|| Apr      .000   .000   .000   .000   .000   .001   .001   .001   .001   .001   .002 ||
|| May      .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .004 ||
|| Jun      .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .002 ||
|| Jul      .000   .000   .000   .000   .000   .000   .000   .001   .001   .002   .003 ||
|| Aug      .000   .000   .000   .000   .000   .000   .001   .001   .002   .003   .004 ||
|| Sep      .000   .000   .000   .000   .000   .000   .001   .001   .001   .001   .002 ||
|| Oct      .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .004 ||
|| Nov      .000   .000   .000   .000   .000   .001   .001   .001   .001   .001   .002 ||
|| Dec      .000   .000   .000   .000   .000   .001   .001   .001   .002   .003   .004 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                   1 hour      24 hour        ||
|| Jan       .001       .000         .000     .003  741     0(0.00%)    0(0.00%)       ||
|| Feb       .001       .000         .000     .003  692     0(0.00%)    0(0.00%)       ||
|| Mar       .000       .000         .001     .004  740     0(0.00%)    0(0.00%)       ||
|| Apr       .001       .000         .000     .002  717     0(0.00%)    0(0.00%)       ||
|| May       .000       .000         .000     .004  722     0(0.00%)    0(0.00%)       ||
|| Jun       .000       .000         .000     .002  718     0(0.00%)    0(0.00%)       ||
|| Jul       .000       .000         .000     .003  733     0(0.00%)    0(0.00%)       ||
|| Aug       .000       .000         .001     .004  742     0(0.00%)    0(0.00%)       ||
|| Sep       .000       .000         .000     .002  716     0(0.00%)    0(0.00%)       ||
|| Oct       .000       .000         .000     .004  742     0(0.00%)    0(0.00%)       ||
|| Nov       .001       .000         .000     .002  715     0(0.00%)    0(0.00%)       ||
|| Dec       .001       .000         .001     .004  740     0(0.00%)    0(0.00%)       ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .000   .000   .001   .001   .001   .002   .004 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                   1 hour      24 hour        ||
|| 1992      .000       .000         .000     .004 8718     0(0.00%)    0(0.00%)       ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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Annual Average Concentration
Year: 1992
Pollutant: H2S [ppm]

Year	EIMU	CIMU	Fort Sask.	Fort McMurray	Fort Mackay
1976	*	*	*	*	*
1977	*	*	*	*	*
1978	*	*	*	*	*
1979	*	*	*	*	*
1980	*	*	*	*	*
1981	*	*	b	*	*
1982	*	*	0.000	*	*
1983	*	*	0.001	b	b
1984	*	*	0.000	0.000a	0.000
1985	*	*	0.000	0.000	0.000
1986	*	0.001	0.001	0.000	0.000
1987	*	0.001	0.001	0.000	0.000
1988	*	0.001	0.001	0.000	0.000
1989	*	0.001	0.001a	0.000	0.001
1990	*	0.001	0.001	0.000	0.000
1991	0.001	0.001	0.001	0.000	0.000
1992	0.001	0.001	0.001	0.000	0.000

a 50% to 75% of data available
b less than 50% of data available

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                              NO2 Summary Statistics for 1992
                              Edmonton Central Monitoring Station
                              Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                                      ||
|| Ambient 24-hour average regulation =   .110 PPM                                     ||
|| Ambient annual average regulation =   .030 PPM                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .002    .010    .017    .020    .026    .033    .041    .049    .053    .068    .082 ||
|| Spring   .003    .005    .009    .012    .016    .022    .030    .039    .044    .052    .065 ||
|| Summer   .002    .005    .008    .009    .014    .019    .025    .031    .035    .045    .056 ||
|| Autumn   .000    .006    .010    .012    .018    .025    .033    .040    .045    .057    .073 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                  1 hour      24 hour          ||
|| Winter    .034       .032         .012      .080 2154     0(0.00%)     0(0.00%)      ||
|| Spring    .024       .021         .011      .062 2194     0(0.00%)     0(0.00%)      ||
|| Summer    .020       .018         .009      .054 2195     0(0.00%)     0(0.00%)      ||
|| Autumn    .026       .023         .011      .073 2111     0(0.00%)     0(0.00%)      ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .010    .013    .020    .023    .028    .035    .043    .048    .053    .062    .082 ||
|| Feb      .002    .012    .017    .019    .025    .033    .041    .050    .056    .068    .081 ||
|| Mar      .007    .009    .013    .015    .021    .029    .038    .045    .050    .059    .065 ||
|| Apr      .004    .007    .010    .012    .016    .021    .027    .035    .039    .047    .052 ||
|| May      .003    .005    .006    .009    .013    .018    .023    .030    .035    .047    .060 ||
|| Jun      .002    .004    .006    .008    .012    .018    .023    .030    .033    .040    .047 ||
|| Jul      .006    .007    .009    .010    .014    .019    .025    .031    .034    .044    .052 ||
|| Aug      .004    .005    .008    .010    .015    .020    .026    .033    .038    .048    .056 ||
|| Sep      .000    .004    .007    .010    .016    .022    .029    .038    .045    .059    .071 ||
|| Oct      .005    .008    .010    .013    .018    .025    .033    .040    .047    .059    .073 ||
|| Nov      .007    .009    .012    .014    .020    .027    .035    .041    .044    .052    .059 ||
|| Dec      .006    .007    .014    .018    .023    .032    .038    .044    .054    .075    .082 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                  1 hour      24 hour          ||
|| Jan       .036       .034         .010      .072  735     0(0.00%)     0(0.00%)      ||
|| Feb       .034       .032         .012      .079  693     0(0.00%)     0(0.00%)      ||
|| Mar       .030       .027         .011      .058  740     0(0.00%)     0(0.00%)      ||
|| Apr       .023       .021         .009      .048  712     0(0.00%)     0(0.00%)      ||
|| May       .019       .017         .009      .057  742     0(0.00%)     0(0.00%)      ||
|| Jun       .018       .016         .008      .045  717     0(0.00%)     0(0.00%)      ||
|| Jul       .020       .019         .008      .046  741     0(0.00%)     0(0.00%)      ||
|| Aug       .021       .019         .009      .052  737     0(0.00%)     0(0.00%)      ||
|| Sep       .023       .019         .011      .071  659     0(0.00%)     0(0.00%)      ||
|| Oct       .026       .024         .011      .068  738     0(0.00%)     0(0.00%)      ||
|| Nov       .027       .026         .010      .052  714     0(0.00%)     0(0.00%)      ||
|| Dec       .032       .029         .012      .076  726     0(0.00%)     0(0.00%)      ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .006    .009    .012    .017    .024    .033    .041    .047    .058    .082 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                  1 hour      24 hour          ||
|| 1992      .026       .023         .012      .082 8654     0(0.00%)     0(0.00%)      ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                         NO2 Summary Statistics for 1992
                         Edmonton Northwest Monitoring Station
                         Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                                    ||
|| Ambient 24-hour average regulation =   .110 PPM                                   ||
|| Ambient annual average regulation =   .030 PPM                                    ||
||-------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .001   .003   .006   .010   .018   .029   .041   .050   .057   .069   .093 ||
|| Spring   .001   .002   .005   .006   .010   .017   .029   .041   .047   .059   .102 ||
|| Summer   .001   .002   .004   .005   .007   .012   .020   .028   .034   .045   .062 ||
|| Autumn   .001   .002   .004   .006   .011   .020   .030   .039   .044   .060   .076 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                   1 hour       24 hour      ||
|| Winter    .030       .025        .016     .092 2177     0(0.00%)     0(0.00%)     ||
|| Spring    .021       .016        .014     .101 2192     0(0.00%)     0(0.00%)     ||
|| Summer    .014       .012        .010     .061 2196     0(0.00%)     0(0.00%)     ||
|| Autumn    .021       .017        .013     .075 2177     0(0.00%)     0(0.00%)     ||
||-------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .003   .004   .008   .012   .020   .034   .044   .052   .058   .072   .079 ||
|| Feb      .004   .004   .008   .011   .018   .030   .043   .053   .060   .073   .093 ||
|| Mar      .002   .003   .006   .008   .013   .025   .039   .048   .055   .066   .102 ||
|| Apr      .001   .002   .005   .006   .009   .015   .023   .036   .043   .054   .066 ||
|| May      .002   .002   .004   .006   .008   .014   .023   .033   .038   .049   .057 ||
|| Jun      .002   .003   .004   .005   .007   .011   .017   .024   .031   .039   .049 ||
|| Jul      .002   .002   .004   .005   .007   .012   .021   .029   .034   .043   .049 ||
|| Aug      .001   .002   .003   .004   .007   .012   .022   .031   .037   .051   .062 ||
|| Sep      .001   .002   .004   .005   .009   .015   .027   .038   .044   .062   .072 ||
|| Oct      .001   .002   .005   .007   .012   .020   .030   .038   .043   .069   .076 ||
|| Nov      .001   .002   .004   .007   .013   .023   .033   .040   .045   .056   .069 ||
|| Dec      .001   .002   .004   .007   .016   .024   .035   .043   .049   .067   .087 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                   1 hour       24 hour      ||
|| Jan       .033       .028        .016     .076  740     0(0.00%)     0(0.00%)     ||
|| Feb       .031       .027        .016     .089  696     0(0.00%)     0(0.00%)     ||
|| Mar       .027       .022        .016     .100  739     0(0.00%)     0(0.00%)     ||
|| Apr       .018       .015        .012     .065  712     0(0.00%)     0(0.00%)     ||
|| May       .017       .013        .011     .055  741     0(0.00%)     0(0.00%)     ||
|| Jun       .013       .011        .008     .047  719     0(0.00%)     0(0.00%)     ||
|| Jul       .015       .012        .010     .047  739     0(0.00%)     0(0.00%)     ||
|| Aug       .016       .012        .011     .061  738     0(0.00%)     0(0.00%)     ||
|| Sep       .019       .015        .013     .071  720     0(0.00%)     0(0.00%)     ||
|| Oct       .022       .018        .013     .075  741     0(0.00%)     0(0.00%)     ||
|| Nov       .023       .019        .013     .068  716     0(0.00%)     0(0.00%)     ||
|| Dec       .025       .021        .014     .086  741     0(0.00%)     0(0.00%)     ||
||--------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .001   .002   .004   .006   .010   .018   .031   .042   .048   .063   .102 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                   1 hour       24 hour      ||
|| 1992      .022       .017        .014     .101 8742     0(0.00%)     0(0.00%)     ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                         NO2 Summary Statistics for 1992
                         Edmonton East Monitoring Station
                         Units are PPM (parts per million)
||-----------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                              ||
|| Ambient 24-hour average regulation =   .110 PPM                             ||
|| Ambient annual average regulation =   .030 PPM                              ||
||-------------------------------------BY SEASON-------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .001   .004   .007   .008   .015   .026   .038   .053   .062   .081   .143 ||
|| Spring   .000   .005   .007   .007   .010   .014   .023   .035   .044   .061   .087 ||
|| Summer   .000   .002   .004   .005   .008   .011   .018   .027   .032   .042   .059 ||
|| Autumn   .001   .003   .004   .006   .009   .017   .029   .039   .045   .053   .062 ||
||                                                                             ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||             Mean      Mean      Std Dev                  1 hour      24 hour  ||
|| Winter    .029       .023         .018     .142 2100     0(0.00%)    0(0.00%)  ||
|| Spring    .018       .015         .012     .087 2181     0(0.00%)    0(0.00%)  ||
|| Summer    .014       .011         .009     .059 1907     0(0.00%)    0(0.00%)  ||
|| Autumn    .020       .016         .013     .061 2182     0(0.00%)    0(0.00%)  ||
||-------------------------------------BY MONTH--------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .003   .006   .007   .010   .017   .029   .044   .059   .070   .093   .143 ||
|| Feb      .001   .001   .005   .007   .011   .027   .040   .058   .065   .083   .114 ||
|| Mar      .005   .006   .007   .008   .012   .019   .032   .046   .056   .071   .087 ||
|| Apr      .002   .005   .006   .007   .009   .013   .020   .029   .038   .048   .056 ||
|| May      .000   .006   .007   .008   .009   .013   .019   .026   .031   .044   .064 ||
|| Jun      .005   .005   .007   .007   .009   .012   .018   .026   .031   .040   .046 ||
|| Jul      .000   .000   .003   .005   .007   .011   .019   .027   .034   .042   .047 ||
|| Aug      .000   .001   .003   .004   .007   .011   .019   .028   .032   .045   .059 ||
|| Sep      .001   .003   .004   .005   .007   .013   .021   .030   .035   .045   .054 ||
|| Oct      .002   .003   .005   .006   .010   .018   .028   .036   .043   .054   .058 ||
|| Nov      .002   .003   .006   .007   .012   .023   .036   .045   .048   .055   .062 ||
|| Dec      .004   .006   .007   .009   .015   .023   .033   .041   .044   .050   .063 ||
||                                                                             ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||             Mean      Mean      Std Dev                  1 hour      24 hour  ||
|| Jan       .033       .027         .020     .140  732     0(0.00%)    0(0.00%)  ||
|| Feb       .029       .022         .019     .113  634     0(0.00%)    0(0.00%)  ||
|| Mar       .024       .019         .015     .082  729     0(0.00%)    0(0.00%)  ||
|| Apr       .016       .014         .010     .054  713     0(0.00%)    0(0.00%)  ||
|| May       .015       .013         .008     .064  739     0(0.00%)    0(0.00%)  ||
|| Jun       .014       .013         .008     .041  638     0(0.00%)    0(0.00%)  ||
|| Jul       .014       .010         .009     .047  528     0(0.00%)    0(0.00%)  ||
|| Aug       .014       .011         .010     .059  741     0(0.00%)    0(0.00%)  ||
|| Sep       .015       .012         .010     .053  720     0(0.00%)    0(0.00%)  ||
|| Oct       .020       .016         .012     .056  744     0(0.00%)    0(0.00%)  ||
|| Nov       .025       .020         .014     .060  718     0(0.00%)    0(0.00%)  ||
|| Dec       .024       .021         .012     .059  734     0(0.00%)    0(0.00%)  ||
||-------------------------------------BY YEAR---------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .003   .005   .007   .010   .016   .028   .040   .048   .066   .143 ||
||                                                                             ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||             Mean      Mean      Std Dev                  1 hour      24 hour  ||
|| 1992      .020       .016         .014     .143 8370     0(0.00%)    0(0.00%)  ||
||-----------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                           NO2 Summary Statistics for 1992
                           Calgary Downtown Monitoring Station
                           Units are PPM (parts per million)
||---------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                                  ||
|| Ambient 24-hour average regulation =   .110 PPM                                 ||
|| Ambient annual average regulation =   .030 PPM                                  ||
||-------------------------------------BY SEASON-----------------------------------||
|| SEASON   MIN    1%    5%    10%   25%   50%   75%   90%   95%   99%   MAX ||
|| Winter   .009  .015  .021  .025  .032  .039  .047  .054  .062  .081  .115 ||
|| Spring   .007  .010  .013  .015  .021  .029  .038  .046  .051  .061  .091 ||
|| Summer   .007  .009  .012  .014  .019  .024  .030  .036  .040  .049  .064 ||
|| Autumn   .007  .010  .014  .017  .023  .031  .039  .045  .050  .064  .085 ||
||                                                                              ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||           Mean       Mean     Std Dev                   1 hour      24 hour     ||
|| Winter    .040       .038       .012     .106 2161     0(0.00%)    0(0.00%)    ||
|| Spring    .030       .028       .012     .084 2174     0(0.00%)    0(0.00%)    ||
|| Summer    .025       .023       .009     .057 2187     0(0.00%)    0(0.00%)    ||
|| Autumn    .031       .029       .011     .078 2170     0(0.00%)    0(0.00%)    ||
||-------------------------------------BY MONTH------------------------------------||
|| MONTH    MIN    1%    5%    10%   25%   50%   75%   90%   95%   99%   MAX ||
|| Jan      .009  .014  .020  .025  .031  .038  .046  .054  .062  .083  .101 ||
|| Feb      .010  .016  .021  .026  .032  .039  .047  .054  .059  .073  .115 ||
|| Mar      .012  .014  .017  .020  .028  .036  .044  .052  .057  .064  .090 ||
|| Apr      .009  .010  .013  .015  .021  .029  .036  .044  .048  .054  .091 ||
|| May      .007  .009  .011  .013  .018  .025  .033  .040  .043  .055  .080 ||
|| Jun      .009  .010  .012  .015  .020  .026  .031  .037  .041  .048  .059 ||
|| Jul      .008  .010  .013  .014  .018  .023  .030  .035  .038  .045  .054 ||
|| Aug      .007  .008  .012  .014  .018  .024  .030  .036  .043  .052  .064 ||
|| Sep      .007  .009  .012  .014  .020  .026  .033  .041  .047  .065  .085 ||
|| Oct      .007  .010  .014  .017  .025  .031  .038  .044  .049  .057  .077 ||
|| Nov      .008  .013  .016  .019  .027  .035  .043  .049  .053  .067  .077 ||
|| Dec      .014  .016  .022  .026  .033  .039  .047  .053  .062  .081  .094 ||
||                                                                              ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||           Mean       Mean     Std Dev                   1 hour      24 hour     ||
|| Jan       .039       .037       .013     .092  737     0(0.00%)    0(0.00%)    ||
|| Feb       .040       .038       .012     .105  689     0(0.00%)    0(0.00%)    ||
|| Mar       .036       .034       .012     .078  728     0(0.00%)    0(0.00%)    ||
|| Apr       .029       .027       .011     .082  710     0(0.00%)    0(0.00%)    ||
|| May       .026       .024       .010     .073  736     0(0.00%)    0(0.00%)    ||
|| Jun       .026       .024       .009     .050  712     0(0.00%)    0(0.00%)    ||
|| Jul       .024       .023       .008     .046  740     0(0.00%)    0(0.00%)    ||
|| Aug       .025       .023       .009     .057  735     0(0.00%)    0(0.00%)    ||
|| Sep       .028       .025       .011     .078  716     0(0.00%)    0(0.00%)    ||
|| Oct       .031       .029       .010     .070  739     0(0.00%)    0(0.00%)    ||
|| Nov       .035       .033       .011     .069  715     0(0.00%)    0(0.00%)    ||
|| Dec       .040       .039       .012     .080  735     0(0.00%)    0(0.00%)    ||
||-------------------------------------BY YEAR-------------------------------------||
|| YEAR     MIN    1%    5%    10%   25%   50%   75%   90%   95%   99%   MAX ||
|| 1992     .007  .010  .014  .016  .023  .031  .039  .047  .052  .067  .115 ||
||                                                                              ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||           Mean       Mean     Std Dev                   1 hour      24 hour     ||
|| 1992      .032       .029       .012     .108 8692     0(0.00%)    0(0.00%)    ||
||---------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                                 NO2 Summary Statistics for 1992
                                 Calgary Residential Monitoring Station
                                 Units are PPM (parts per million)
||-------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                                ||
|| Ambient 24-hour average regulation =   .110 PPM                               ||
|| Ambient annual average regulation =   .030 PPM                                ||
||-----------------------------------BY SEASON-----------------------------------||
|| SEASON   MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter  .002   .004   .007   .010   .015   .024   .032   .039   .043   .053   .091 ||
|| Spring  .002   .003   .004   .005   .008   .013   .020   .031   .037   .049   .059 ||
|| Summer  .002   .002   .004   .005   .006   .009   .014   .020   .024   .035   .049 ||
|| Autumn  .002   .003   .004   .005   .009   .015   .023   .032   .038   .046   .065 ||
||                                                                               ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N     Number of Exceedances   ||
||          Mean      Mean     Std Dev                  1 hour      24 hour      ||
|| Winter   .024      .021       .011      .090 2126    0(0.00%)    0(0.00%)     ||
|| Spring   .016      .013       .010      .057 2073    0(0.00%)    0(0.00%)     ||
|| Summer   .011      .009       .007      .048 2010    0(0.00%)    0(0.00%)     ||
|| Autumn   .017      .014       .010      .063 2154    0(0.00%)    0(0.00%)     ||
||-----------------------------------BY MONTH------------------------------------||
|| MONTH    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan     .002   .004   .007   .010   .015   .022   .032   .040   .044   .056   .069 ||
|| Feb     .003   .003   .008   .010   .016   .025   .032   .039   .043   .058   .091 ||
|| Mar     .003   .004   .006   .008   .012   .019   .027   .040   .046   .054   .059 ||
|| Apr     .003   .003   .004   .006   .007   .011   .017   .026   .032   .042   .047 ||
|| May     .002   .003   .003   .004   .006   .010   .015   .021   .026   .035   .040 ||
|| Jun     .002   .003   .004   .005   .006   .009   .013   .019   .022   .028   .037 ||
|| Jul     .002   .002   .004   .005   .006   .009   .013   .019   .024   .035   .042 ||
|| Aug     .002   .002   .003   .004   .006   .010   .015   .021   .028   .040   .049 ||
|| Sep     .002   .002   .003   .004   .006   .010   .018   .026   .032   .047   .065 ||
|| Oct     .002   .003   .005   .006   .009   .015   .023   .032   .037   .044   .052 ||
|| Nov     .002   .003   .005   .007   .013   .020   .027   .037   .041   .047   .056 ||
|| Dec     .003   .004   .007   .009   .016   .025   .033   .039   .043   .048   .054 ||
||                                                                               ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N     Number of Exceedances   ||
||          Mean      Mean     Std Dev                  1 hour      24 hour      ||
|| Jan      .024      .021       .012      .068  725    0(0.00%)    0(0.00%)     ||
|| Feb      .025      .022       .012      .088  663    0(0.00%)    0(0.00%)     ||
|| Mar      .021      .018       .012      .056  727    0(0.00%)    0(0.00%)     ||
|| Apr      .014      .011       .009      .044  714    0(0.00%)    0(0.00%)     ||
|| May      .011      .009       .007      .038  632    0(0.00%)    0(0.00%)     ||
|| Jun      .011      .009       .006      .035  712    0(0.00%)    0(0.00%)     ||
|| Jul      .011      .009       .006      .041  559    0(0.00%)    0(0.00%)     ||
|| Aug      .012      .009       .008      .048  739    0(0.00%)    0(0.00%)     ||
|| Sep      .013      .010       .010      .063  697    0(0.00%)    0(0.00%)     ||
|| Oct      .017      .014       .010      .050  741    0(0.00%)    0(0.00%)     ||
|| Nov      .021      .017       .011      .054  716    0(0.00%)    0(0.00%)     ||
|| Dec      .024      .022       .011      .051  738    0(0.00%)    0(0.00%)     ||
||------------------------------------BY YEAR------------------------------------||
|| YEAR     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992    .002   .003   .004   .005   .008   .014   .024   .033   .039   .048   .091 ||
||                                                                               ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N     Number of Exceedances   ||
||          Mean      Mean     Std Dev                  1 hour      24 hour      ||
|| 1992     .017      .014       .011      .090 8363    0(0.00%)    0(0.00%)     ||
||-------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                          NO2 Summary Statistics for 1992
                          Calgary Industrial Monitoring Station
                          Units are PPM (parts per million)
||------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                                     ||
|| Ambient 24-hour average regulation =   .110 PPM                                    ||
|| Ambient annual average regulation =   .030 PPM                                     ||
||-------------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .003   .006   .011   .014   .022   .032   .039   .046   .053   .076   .112 ||
|| Spring   .002   .003   .006   .008   .014   .024   .033   .041   .046   .053   .079 ||
|| Summer   .002   .003   .006   .009   .013   .019   .026   .033   .038   .054   .087 ||
|| Autumn   .002   .004   .007   .009   .016   .025   .033   .039   .043   .052   .069 ||
||                                                                                    ||
|| SEASON Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                    1 hour       24 hour        ||
|| Winter    .031       .028        .014     .109 2161     0(0.00%)     0(0.00%)       ||
|| Spring    .024       .021        .012     .077 1832     0(0.00%)     0(0.00%)       ||
|| Summer    .021       .018        .010     .086 2026     0(0.00%)     0(0.00%)       ||
|| Autumn    .025       .022        .011     .067 2105     0(0.00%)     0(0.00%)       ||
||-------------------------------------BY MONTH---------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .003   .004   .009   .012   .021   .032   .039   .046   .055   .076   .086 ||
|| Feb      .004   .007   .011   .015   .021   .029   .038   .048   .054   .083   .112 ||
|| Mar      .006   .007   .011   .014   .020   .028   .038   .045   .049   .053   .071 ||
|| Apr      .003   .004   .006   .007   .012   .023   .032   .040   .044   .064   .079 ||
|| May      .002   .003   .004   .006   .010   .019   .027   .035   .039   .047   .056 ||
|| Jun      .004   .006   .009   .010   .015   .022   .031   .042   .051   .068   .087 ||
|| Jul      .004   .005   .008   .010   .014   .019   .024   .028   .033   .041   .051 ||
|| Aug      .002   .002   .005   .006   .012   .019   .025   .030   .033   .042   .048 ||
|| Sep      .002   .003   .005   .007   .012   .021   .028   .034   .040   .052   .062 ||
|| Oct      .005   .006   .008   .011   .018   .026   .033   .039   .042   .050   .056 ||
|| Nov      .004   .005   .007   .010   .019   .029   .036   .041   .046   .060   .069 ||
|| Dec      .005   .008   .011   .015   .023   .033   .039   .046   .051   .071   .096 ||
||                                                                                    ||
|| MONTH  Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                    1 hour       24 hour        ||
|| Jan       .031       .027        .014     .083  734     0(0.00%)     0(0.00%)       ||
|| Feb       .031       .028        .014     .108  687     0(0.00%)     0(0.00%)       ||
|| Mar       .029       .026        .012     .065  732     0(0.00%)     0(0.00%)       ||
|| Apr       .023       .019        .013     .076  547     0(0.00%)     0(0.00%)       ||
|| May       .020       .016        .011     .054  553     0(0.00%)     0(0.00%)       ||
|| Jun       .024       .021        .013     .083  626     0(0.00%)     0(0.00%)       ||
|| Jul       .019       .018        .007     .047  662     0(0.00%)     0(0.00%)       ||
|| Aug       .019       .016        .009     .047  738     0(0.00%)     0(0.00%)       ||
|| Sep       .021       .017        .011     .060  651     0(0.00%)     0(0.00%)       ||
|| Oct       .026       .023        .010     .051  740     0(0.00%)     0(0.00%)       ||
|| Nov       .028       .025        .012     .065  714     0(0.00%)     0(0.00%)       ||
|| Dec       .032       .029        .013     .091  740     0(0.00%)     0(0.00%)       ||
||--------------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .002   .004   .007   .010   .016   .024   .034   .041   .046   .061   .112 ||
||                                                                                    ||
|| YEAR   Arithmetic Geometric Arithmetic  Range    N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                    1 hour       24 hour        ||
|| 1992      .025       .022        .013     .111 8124     0(0.00%)     0(0.00%)       ||
||------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                          NO2 Summary Statistics for 1992
                          Fort Saskatchewan Monitoring Station
                          Units are PPM (parts per million)
||----------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                                   ||
|| Ambient 24-hour average regulation =   .110 PPM                                  ||
|| Ambient annual average regulation =   .030 PPM                                   ||
||-------------------------------------BY SEASON------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .001   .005   .016   .033   .041   .046   .062   .096 ||
|| Spring   .000   .000   .000   .000   .001   .004   .011   .023   .028   .041   .089 ||
|| Summer   .000   .000   .000   .000   .002   .004   .008   .013   .017   .026   .035 ||
|| Autumn   .000   .000   .000   .001   .003   .007   .017   .026   .031   .043   .065 ||
||                                                                                  ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances     ||
||           Mean      Mean     Std Dev                    1 hour     24 hour       ||
|| Winter    .019      .007        .016     .096 1313     0(0.00%)    0(0.00%)      ||
|| Spring    .008      .001        .010     .089 2096     0(0.00%)    0(0.00%)      ||
|| Summer    .005      .002        .005     .035 2059     0(0.00%)    0(0.00%)      ||
|| Autumn    .011      .004        .010     .065 2071     0(0.00%)    0(0.00%)      ||
||-------------------------------------BY MONTH-------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .005   .022   .037   .043   .049   .083   .096 ||
|| Feb      .000   .000   .001   .002   .005   .012   .026   .037   .044   .052   .057 ||
|| Mar      .000   .000   .000   .001   .003   .008   .022   .029   .033   .046   .089 ||
|| Apr      .000   .000   .000   .000   .000   .002   .007   .014   .020   .029   .035 ||
|| May      .000   .000   .000   .000   .001   .003   .007   .015   .021   .032   .051 ||
|| Jun      .000   .000   .000   .000   .002   .003   .007   .012   .016   .023   .029 ||
|| Jul      .000   .000   .000   .000   .002   .004   .008   .013   .016   .022   .035 ||
|| Aug      .000   .000   .000   .001   .001   .004   .009   .014   .020   .028   .032 ||
|| Sep      .000   .000   .000   .001   .002   .005   .017   .025   .031   .042   .051 ||
|| Oct      .000   .000   .001   .001   .003   .007   .016   .024   .028   .039   .054 ||
|| Nov      .000   .000   .000   .001   .003   .008   .020   .029   .035   .045   .065 ||
|| Dec        *      *      *      *      *      *      *      *      *      *      *  ||
||                                                                                  ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances     ||
||           Mean      Mean     Std Dev                    1 hour     24 hour       ||
|| Jan       .023      .006        .018     .096  621     0(0.00%)    0(0.00%)      ||
|| Feb       .017      .009        .014     .057  692     0(0.00%)    0(0.00%)      ||
|| Mar       .013      .005        .012     .089  683     0(0.00%)    0(0.00%)      ||
|| Apr       .005      .000        .007     .035  693     0(0.00%)    0(0.00%)      ||
|| May       .006      .001        .007     .051  720     0(0.00%)    0(0.00%)      ||
|| Jun       .005      .002        .005     .029  716     0(0.00%)    0(0.00%)      ||
|| Jul       .005      .002        .005     .035  728     0(0.00%)    0(0.00%)      ||
|| Aug       .006      .002        .006     .032  615     0(0.00%)    0(0.00%)      ||
|| Sep       .010      .003        .010     .051  612     0(0.00%)    0(0.00%)      ||
|| Oct       .011      .005        .009     .054  744     0(0.00%)    0(0.00%)      ||
|| Nov       .012      .004        .012     .065  715     0(0.00%)    0(0.00%)      ||
|| Dec         *         *           *        *     *                *              ||
||--------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .002   .005   .014   .027   .035   .047   .096 ||
||                                                                                  ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances     ||
||           Mean      Mean     Std Dev                    1 hour     24 hour       ||
|| 1992      .010      .002        .012     .096 7539     0(0.00%)    0(0.00%)      ||
||----------------------------------------------------------------------------------||
   n/a - not applicable           * - no data
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                             NO2 Summary Statistics for 1992
                             Fort McMurray Monitoring Station
                             Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .210 PPM                                      ||
|| Ambient 24-hour average regulation =   .110 PPM                                     ||
|| Ambient annual average regulation =   .030 PPM                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .004   .010   .018   .026   .033   .051   .070 ||
|| Spring   .000   .001   .001   .001   .002   .005   .010   .019   .026   .040   .064 ||
|| Summer   .000   .000   .001   .001   .002   .003   .005   .009   .013   .019   .024 ||
|| Autumn   .000   .000   .000   .000   .002   .005   .010   .016   .020   .026   .033 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range  N      Number of Exceedances         ||
||           Mean      Mean     Std Dev                   1 hour      24 hour          ||
|| Winter    .012      .004        .011     .070 2077    0(0.00%)     0(0.00%)         ||
|| Spring    .008      .005        .008     .064 1880    0(0.00%)     0(0.00%)         ||
|| Summer    .004      .003        .004     .024  909    0(0.00%)     0(0.00%)         ||
|| Autumn    .007      .002        .006     .033 1070    0(0.00%)     0(0.00%)         ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .003   .010   .014   .021   .030   .040   .054   .061 ||
|| Feb      .001   .001   .002   .002   .005   .012   .021   .031   .038   .057   .070 ||
|| Mar      .001   .001   .001   .001   .003   .008   .016   .027   .036   .051   .055 ||
|| Apr      .000   .001   .001   .001   .002   .004   .008   .013   .020   .040   .064 ||
|| May      .000   .001   .001   .001   .002   .004   .009   .017   .023   .034   .047 ||
|| Jun      .000   .000   .001   .001   .002   .003   .006   .010   .013   .021   .024 ||
|| Jul      .000   .000   .000   .001   .001   .003   .004   .007   .008   .011   .013 ||
|| Aug       *      *      *      *      *      *      *      *      *      *      *   ||
|| Sep       *      *      *      *      *      *      *      *      *      *      *   ||
|| Oct      .000   .001   .001   .003   .005   .009   .016   .021   .023   .031   .033 ||
|| Nov      .000   .000   .000   .000   .001   .004   .008   .011   .014   .022   .030 ||
|| Dec      .000   .000   .000   .000   .001   .005   .011   .016   .019   .023   .030 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range  N      Number of Exceedances         ||
||           Mean      Mean     Std Dev                   1 hour      24 hour          ||
|| Jan       .016      .008        .012     .061  639    0(0.00%)     0(0.00%)         ||
|| Feb       .015      .010        .012     .069  694    0(0.00%)     0(0.00%)         ||
|| Mar       .012      .007        .011     .054  429    0(0.00%)     0(0.00%)         ||
|| Apr       .007      .004        .007     .064  711    0(0.00%)     0(0.00%)         ||
|| May       .007      .004        .007     .047  740    0(0.00%)     0(0.00%)         ||
|| Jun       .005      .003        .004     .024  717    0(0.00%)     0(0.00%)         ||
|| Jul       .003      .002        .002     .013  192    0(0.00%)     0(0.00%)         ||
|| Aug        *         *           *        *     *                *                  ||
|| Sep        *         *           *        *     *                *                  ||
|| Oct       .011      .008        .007     .033  353    0(0.00%)     0(0.00%)         ||
|| Nov       .005      .001        .005     .030  717    0(0.00%)     0(0.00%)         ||
|| Dec       .007      .001        .006     .030  744    0(0.00%)     0(0.00%)         ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .001   .002   .006   .012   .020   .027   .043   .070 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range  N      Number of Exceedances         ||
||           Mean      Mean     Std Dev                   1 hour      24 hour          ||
|| 1992      .009      .003        .009     .070 5936    0(0.00%)     0(0.00%)         ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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||-------------------------------------------------------------------||
||                 Annual Average Concentration                      ||
||                 Year: 1992                                        ||
||                 Pollutant: NO2 [ppm]                              ||
||--------+----------------------------------------------------------||
|| Year   |  EDMU  ERMU  EIMU  CDMU  CRMU  CIMU   Fort    Fort   Fort ||
||        |                                      Sask. McMurray Mackay ||
||--------+----------------------------------------------------------||
|| 1976   |  0.053 0.024 0.009 0.032 0.016 0.024   *     0.032    *   ||
|| 1977   |  0.039 0.020 0.016 0.044 0.025 0.031   *       *      *   ||
|| 1978   |  0.042 0.028 0.019 0.046 0.027 0.032   *       *      *   ||
|| 1979   |  0.043 0.029 0.023 0.047 0.023 0.027   *     0.010a   *   ||
|| 1980   |  0.036 0.023 0.017 0.041 0.019 0.025   *       b      *   ||
|| 1981   |  0.043 0.031 0.022 0.036 0.018 0.020   b     0.010    *   ||
|| 1982   |  0.037 0.027 0.017 0.047 0.018 0.030 0.020   0.010    *   ||
|| 1983   |  0.027 0.025 0.018 0.037 0.018 0.028 0.020   0.010    b   ||
|| 1984   |  0.026 0.023 0.013 0.033 0.018 0.028 0.020   0.010a 0.000 ||
|| 1985   |  0.029 0.020 0.019 0.036 0.015 0.027 0.010   0.010a 0.000 ||
|| 1986   |  0.030 0.019 0.016 0.035 0.021 0.027 0.013   0.010  0.003 ||
|| 1987   |  0.031 0.020 0.016 0.034 0.020 0.025 0.014   0.010    b   ||
|| 1988   |  0.028 0.020 0.016 0.035 0.019 0.026 0.013   0.010    *   ||
|| 1989   |  0.026 0.022 0.015 0.035 0.020 0.029 0.009a  0.010    *   ||
|| 1990   |  0.027 0.025 0.019 0.034 0.018 0.027 0.013   0.011    *   ||
|| 1991   |  0.029 0.026 0.021 0.037 0.018 0.026 0.013   0.010    *   ||
|| 1992   |  0.026 0.022 0.020 0.032 0.017 0.025 0.010   0.009    *   ||
||--------+----------------------------------------------------------||

a  50% to 75% of data available
b  less than 50% of data available
```

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                         NO  Summary Statistics for 1992
                         Edmonton Central Monitoring Station
                         Units are PPM (parts per million)
||---------------------------------------------------------------------------------||
|| No regulations                                                                  ||
||------------------------------------BY SEASON------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .004   .007   .011   .019   .038   .071   .115   .157   .264   .481 ||
|| Spring   .002   .003   .005   .006   .009   .018   .030   .051   .077   .151   .385 ||
|| Summer   .001   .002   .003   .004   .006   .012   .021   .032   .043   .073   .128 ||
|| Autumn   .001   .003   .005   .007   .011   .023   .044   .083   .114   .232   .524 ||
||                                                                                 ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean      Mean      Std Dev                                           ||
|| Winter    .054       .036        .054     .481 2154            n/a              ||
|| Spring    .026       .018        .029     .383 2194            n/a              ||
|| Summer    .016       .012        .015     .127 2195            n/a              ||
|| Autumn    .037       .023        .043     .523 2111            n/a              ||
||-------------------------------------BY MONTH------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .004   .004   .006   .011   .018   .037   .067   .115   .154   .276   .384 ||
|| Feb      .003   .004   .007   .011   .020   .036   .072   .115   .160   .316   .481 ||
|| Mar      .003   .004   .007   .008   .014   .025   .044   .084   .118   .216   .385 ||
|| Apr      .003   .004   .005   .006   .010   .018   .029   .044   .060   .102   .279 ||
|| May      .002   .003   .004   .005   .007   .012   .020   .031   .039   .076   .134 ||
|| Jun      .001   .002   .003   .004   .006   .011   .019   .029   .038   .059   .102 ||
|| Jul      .001   .002   .003   .004   .007   .013   .021   .035   .048   .082   .123 ||
|| Aug      .001   .002   .003   .004   .006   .013   .022   .033   .046   .084   .128 ||
|| Sep      .001   .002   .003   .005   .010   .018   .033   .070   .104   .171   .524 ||
|| Oct      .002   .003   .006   .007   .011   .022   .044   .085   .124   .260   .459 ||
|| Nov      .004   .005   .007   .009   .015   .030   .052   .091   .124   .221   .271 ||
|| Dec      .000   .004   .008   .011   .019   .041   .074   .116   .156   .247   .332 ||
||                                                                                 ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean      Mean      Std Dev                                           ||
|| Jan       .053       .035        .051     .380  735            n/a              ||
|| Feb       .055       .036        .059     .478  693            n/a              ||
|| Mar       .038       .025        .041     .382  740            n/a              ||
|| Apr       .023       .017        .022     .276  712            n/a              ||
|| May       .016       .012        .014     .132  742            n/a              ||
|| Jun       .015       .011        .012     .101  717            n/a              ||
|| Jul       .017       .012        .016     .122  741            n/a              ||
|| Aug       .017       .012        .016     .127  737            n/a              ||
|| Sep       .030       .018        .038     .523  659            n/a              ||
|| Oct       .038       .023        .049     .457  738            n/a              ||
|| Nov       .042       .029        .040     .267  714            n/a              ||
|| Dec       .055       .036        .050     .332  726            n/a              ||
||-------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .002   .004   .006   .010   .020   .039   .076   .107   .205   .524 ||
||                                                                                 ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean      Mean      Std Dev                                           ||
|| 1992      .033       .020        .041     .524 8654            n/a              ||
||---------------------------------------------------------------------------------||
   n/a - not applicable         * - no data
```

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                                 NO  Summary Statistics for 1992
                                 Edmonton Northwest Monitoring Station
                                 Units are PPM (parts per million)
||--------------------------------------------------------------------------------------||
|| No regulations                                                                       ||
||-------------------------------------BY SEASON----------------------------------------||
|| SEASON    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .001    .003    .010    .032    .081    .157    .232    .392    .620 ||
|| Spring   .000    .000    .001    .002    .004    .010    .020    .064    .108    .198    .454 ||
|| Summer   .000    .000    .001    .001    .003    .007    .012    .025    .043    .092    .231 ||
|| Autumn   .000    .001    .002    .003    .008    .019    .050    .125    .190    .447    .885 ||
||                                                                                      ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean       Mean      Std Dev                                               ||
|| Winter    .062       .021        .081     .620 2177             n/a                  ||
|| Spring    .024       .008        .043     .454 2192             n/a                  ||
|| Summer    .012       .005        .017     .231 2196             n/a                  ||
|| Autumn    .048       .019        .083     .885 2177             n/a                  ||
||-------------------------------------BY MONTH-----------------------------------------||
|| MONTH     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .002    .004    .014    .040    .112    .202    .280    .449    .620 ||
|| Feb      .000    .000    .001    .003    .010    .029    .070    .132    .187    .361    .479 ||
|| Mar      .000    .000    .001    .003    .008    .018    .053    .120    .173    .339    .454 ||
|| Apr      .000    .000    .001    .002    .003    .008    .016    .034    .060    .138    .232 ||
|| May      .000    .000    .001    .001    .003    .008    .013    .024    .043    .105    .180 ||
|| Jun      .000    .000    .001    .001    .002    .005    .009    .016    .024    .043    .092 ||
|| Jul      .000    .000    .001    .001    .003    .007    .013    .025    .037    .085    .120 ||
|| Aug      .000    .000    .001    .001    .003    .007    .017    .043    .063    .113    .231 ||
|| Sep      .000    .001    .002    .003    .007    .016    .038    .102    .146    .365    .793 ||
|| Oct      .000    .001    .002    .003    .007    .017    .046    .116    .195    .626    .885 ||
|| Nov      .000    .001    .002    .004    .010    .025    .072    .152    .208    .311    .567 ||
|| Dec      .000    .000    .001    .003    .008    .026    .070    .131    .193    .414    .538 ||
||                                                                                      ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean       Mean      Std Dev                                               ||
|| Jan       .078       .030        .094     .620  740             n/a                  ||
|| Feb       .054       .017        .068     .479  696             n/a                  ||
|| Mar       .043       .015        .063     .454  739             n/a                  ||
|| Apr       .016       .006        .026     .232  712             n/a                  ||
|| May       .012       .006        .018     .180  741             n/a                  ||
|| Jun       .007       .003        .008     .092  719             n/a                  ||
|| Jul       .012       .006        .015     .120  739             n/a                  ||
|| Aug       .015       .006        .023     .231  738             n/a                  ||
|| Sep       .039       .015        .074     .793  720             n/a                  ||
|| Oct       .049       .018        .100     .885  741             n/a                  ||
|| Nov       .055       .024        .072     .567  716             n/a                  ||
|| Dec       .054       .019        .075     .538  741             n/a                  ||
||-------------------------------------BY YEAR------------------------------------------||
|| YEAR      MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .000    .001    .002    .005    .012    .036    .101    .151    .312    .885 ||
||                                                                                      ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean       Mean      Std Dev                                               ||
|| 1992      .036       .011        .065     .885 8742             n/a                  ||
||--------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                         NO  Summary Statistics for 1992
                         Edmonton East Monitoring Station
                         Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| No regulations                                                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .000    .000    .002    .009    .034    .080    .109    .181    .335 ||
|| Spring   .000    .001    .002    .003    .006    .010    .017    .028    .047    .102    .203 ||
|| Summer   .000    .000    .001    .003    .007    .012    .019    .026    .036    .069    .127 ||
|| Autumn   .000    .000    .000    .000    .004    .012    .024    .061    .096    .178    .307 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range     N      Number of Exceedances      ||
||           Mean       Mean      Std Dev                                              ||
|| Winter    .026       .002         .040     .335 2099              n/a               ||
|| Spring    .015       .009         .018     .203 2181              n/a               ||
|| Summer    .015       .008         .013     .127 1907              n/a               ||
|| Autumn    .023       .004         .035     .307 2181              n/a               ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .000    .000    .000    .006    .036    .092    .132    .201    .329 ||
|| Feb      .000    .000    .000    .000    .002    .009    .034    .078    .098    .151    .335 ||
|| Mar      .002    .003    .004    .005    .008    .012    .020    .048    .080    .132    .203 ||
|| Apr      .000    .002    .006    .007    .009    .013    .020    .029    .042    .073    .102 ||
|| May      .000    .000    .001    .002    .003    .006    .009    .014    .019    .049    .130 ||
|| Jun      .000    .001    .003    .004    .007    .009    .013    .018    .024    .042    .063 ||
|| Jul      .000    .000    .001    .002    .006    .011    .015    .027    .041    .073    .083 ||
|| Aug      .000    .000    .000    .002    .012    .018    .023    .032    .047    .079    .127 ||
|| Sep      .000    .001    .005    .008    .010    .014    .023    .042    .059    .126    .180 ||
|| Oct      .000    .000    .000    .000    .000    .007    .020    .062    .101    .198    .307 ||
|| Nov      .000    .000    .000    .001    .002    .011    .036    .086    .111    .190    .244 ||
|| Dec      .000    .000    .000    .001    .005    .011    .032    .072    .105    .189    .250 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range     N      Number of Exceedances      ||
||           Mean       Mean      Std Dev                                              ||
|| Jan       .027       .001         .045     .329  731              n/a               ||
|| Feb       .025       .002         .037     .335  634              n/a               ||
|| Mar       .021       .014         .026     .201  729              n/a               ||
|| Apr       .017       .013         .013     .102  713              n/a               ||
|| May       .008       .005         .009     .130  739              n/a               ||
|| Jun       .011       .008         .007     .063  638              n/a               ||
|| Jul       .014       .007         .013     .083  528              n/a               ||
|| Aug       .019       .009         .015     .127  741              n/a               ||
|| Sep       .021       .014         .021     .180  720              n/a               ||
|| Oct       .021       .001         .039     .307  744              n/a               ||
|| Nov       .028       .005         .041     .244  717              n/a               ||
|| Dec       .027       .006         .037     .250  734              n/a               ||
||-------------------------------------BY YEAR-----------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .000    .000    .001    .005    .011    .021    .048    .079    .152    .335 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range     N      Number of Exceedances      ||
||           Mean       Mean      Std Dev                                              ||
|| 1992      .020       .005         .029     .335 8368              n/a               ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                              NO  Summary Statistics for 1992
                              Calgary Downtown Monitoring Station
                              Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| No regulations                                                                    ||
||------------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .002    .004    .011    .032    .073    .154    .233    .372    .684 ||
|| Spring   .000    .000    .000    .000    .002    .006    .018    .046    .070    .170    .363 ||
|| Summer   .000    .000    .000    .001    .003    .007    .015    .032    .046    .084    .181 ||
|| Autumn   .000    .001    .002    .003    .007    .018    .046    .093    .134    .253    .422 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| Winter    .059       .022        .078     .684 2161             n/a               ||
|| Spring    .017       .002        .031     .363 2174             n/a               ||
|| Summer    .012       .004        .017     .181 2187             n/a               ||
|| Autumn    .037       .016        .050     .422 2170             n/a               ||
||------------------------------------BY MONTH---------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .001    .002    .007    .030    .074    .163    .235    .386    .684 ||
|| Feb      .000    .000    .002    .003    .012    .032    .077    .149    .225    .352    .480 ||
|| Mar      .000    .000    .000    .001    .004    .011    .032    .069    .105    .197    .363 ||
|| Apr      .000    .000    .000    .000    .002    .005    .016    .044    .070    .139    .294 ||
|| May      .000    .000    .000    .000    .001    .004    .012    .025    .037    .068    .150 ||
|| Jun      .000    .000    .000    .000    .001    .005    .012    .031    .043    .077    .129 ||
|| Jul      .000    .001    .001    .002    .004    .008    .017    .032    .044    .077    .101 ||
|| Aug      .000    .000    .001    .002    .003    .007    .015    .033    .051    .101    .181 ||
|| Sep      .000    .001    .002    .003    .005    .012    .029    .075    .130    .252    .335 ||
|| Oct      .000    .000    .002    .003    .007    .020    .044    .086    .124    .224    .376 ||
|| Nov      .000    .001    .002    .004    .010    .027    .063    .105    .155    .299    .422 ||
|| Dec      .000    .001    .004    .006    .014    .032    .066    .153    .244    .375    .629 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| Jan       .060       .016        .083     .684  737             n/a               ||
|| Feb       .059       .022        .073     .480  689             n/a               ||
|| Mar       .027       .007        .041     .363  728             n/a               ||
|| Apr       .016       .002        .030     .294  710             n/a               ||
|| May       .009       .001        .015     .150  736             n/a               ||
|| Jun       .011       .001        .016     .129  712             n/a               ||
|| Jul       .013       .007        .015     .101  740             n/a               ||
|| Aug       .013       .006        .019     .181  735             n/a               ||
|| Sep       .029       .012        .046     .335  716             n/a               ||
|| Oct       .035       .015        .046     .376  739             n/a               ||
|| Nov       .046       .022        .055     .422  715             n/a               ||
|| Dec       .059       .029        .078     .629  735             n/a               ||
||------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .000    .000    .001    .004    .012    .036    .080    .127    .285    .684 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| 1992      .031       .007        .053     .684 8692             n/a               ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                              NO  Summary Statistics for 1992
                              Calgary Residential Monitoring Station
                              Units are PPM (parts per million)
||-------------------------------------------------------------------------------||
|| No regulations                                                                ||
||-------------------------------------BY SEASON---------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%     MAX ||
|| Winter   .000   .000   .000   .000   .001   .007   .023   .067   .109   .229   .490 ||
|| Spring   .000   .000   .000   .000   .000   .001   .004   .011   .023   .067   .303 ||
|| Summer   .000   .000   .000   .000   .000   .001   .003   .008   .013   .030   .082 ||
|| Autumn   .000   .000   .000   .001   .002   .004   .013   .031   .059   .169   .489 ||
||                                                                               ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean      Mean     Std Dev                                          ||
|| Winter    .023      .002        .044     .490 2126             n/a            ||
|| Spring    .005      .000        .017     .303 2073             n/a            ||
|| Summer    .003      .000        .007     .082 2010             n/a            ||
|| Autumn    .014      .003        .032     .489 2154             n/a            ||
||-------------------------------------BY MONTH----------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%     MAX ||
|| Jan      .000   .000   .000   .000   .001   .005   .020   .067   .123   .286   .490 ||
|| Feb      .000   .000   .000   .000   .001   .005   .025   .079   .120   .219   .295 ||
|| Mar      .000   .000   .000   .000   .000   .001   .005   .020   .047   .142   .303 ||
|| Apr      .000   .000   .000   .000   .000   .001   .004   .010   .017   .056   .087 ||
|| May      .000   .000   .000   .000   .000   .001   .003   .006   .010   .033   .052 ||
|| Jun      .000   .000   .000   .000   .000   .001   .003   .006   .010   .016   .030 ||
|| Jul      .000   .000   .000   .000   .000   .002   .003   .009   .017   .031   .046 ||
|| Aug      .000   .000   .000   .000   .000   .001   .003   .009   .016   .054   .082 ||
|| Sep      .000   .000   .000   .000   .001   .003   .008   .021   .039   .131   .230 ||
|| Oct      .000   .000   .001   .001   .002   .005   .012   .033   .059   .132   .245 ||
|| Nov      .000   .000   .001   .001   .002   .007   .018   .041   .076   .239   .489 ||
|| Dec      .000   .000   .001   .001   .003   .010   .023   .060   .092   .190   .335 ||
||                                                                               ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean      Mean     Std Dev                                          ||
|| Jan       .023      .001        .050     .490  725             n/a            ||
|| Feb       .024      .001        .045     .295  663             n/a            ||
|| Mar       .009      .000        .026     .303  727             n/a            ||
|| Apr       .004      .000        .010     .087  714             n/a            ||
|| May       .003      .000        .005     .052  632             n/a            ||
|| Jun       .002      .000        .003     .030  712             n/a            ||
|| Jul       .003      .000        .006     .046  559             n/a            ||
|| Aug       .004      .000        .009     .082  739             n/a            ||
|| Sep       .010      .001        .023     .230  697             n/a            ||
|| Oct       .013      .004        .026     .245  741             n/a            ||
|| Nov       .020      .005        .043     .489  716             n/a            ||
|| Dec       .022      .007        .037     .335  738             n/a            ||
||-------------------------------------BY YEAR-----------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%     MAX ||
|| 1992     .000   .000   .000   .000   .000   .002   .009   .028   .055   .152   .490 ||
||                                                                               ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean      Mean     Std Dev                                          ||
|| 1992      .012      .001        .030     .490 8363             n/a            ||
||-------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                    NO  Summary Statistics for 1992
                    Calgary Industrial Monitoring Station
                    Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| No regulations                                                                    ||
||------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .001   .009   .043   .118   .243   .329   .514   .724 ||
|| Spring   .000   .000   .000   .000   .001   .009   .030   .077   .120   .263   .414 ||
|| Summer   .000   .000   .000   .000   .002   .009   .021   .041   .062   .116   .210 ||
|| Autumn   .000   .000   .000   .001   .005   .025   .075   .160   .246   .426   .655 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean      Std Dev                                             ||
|| Winter    .087      .018        .113     .724 2161             n/a                ||
|| Spring    .028      .002        .049     .414 1832             n/a                ||
|| Summer    .017      .003        .023     .210 2002             n/a                ||
|| Autumn    .059      .010        .085     .655 2105             n/a                ||
||------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .001   .006   .047   .138   .271   .350   .564   .724 ||
|| Feb      .000   .000   .001   .002   .013   .048   .120   .230   .318   .529   .712 ||
|| Mar      .000   .000   .000   .001   .006   .018   .056   .114   .196   .307   .352 ||
|| Apr      .000   .000   .000   .000   .001   .007   .026   .066   .090   .255   .414 ||
|| May      .000   .000   .000   .000   .000   .003   .012   .030   .051   .128   .219 ||
|| Jun      .000   .000   .000   .000   .002   .007   .019   .033   .052   .102   .185 ||
|| Jul      .000   .000   .000   .001   .003   .011   .023   .042   .058   .115   .155 ||
|| Aug      .000   .000   .000   .000   .002   .008   .023   .048   .074   .121   .210 ||
|| Sep      .000   .000   .000   .000   .003   .014   .040   .104   .167   .286   .479 ||
|| Oct      .000   .000   .001   .002   .008   .032   .079   .158   .231   .428   .655 ||
|| Nov      .000   .000   .000   .001   .005   .037   .101   .214   .303   .435   .523 ||
|| Dec      .000   .000   .001   .001   .007   .032   .099   .222   .318   .483   .600 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean      Std Dev                                             ||
|| Jan       .096      .013        .124     .724  734             n/a                ||
|| Feb       .087      .026        .108     .712  687             n/a                ||
|| Mar       .044      .009        .063     .352  732             n/a                ||
|| Apr       .023      .001        .042     .414  547             n/a                ||
|| May       .012      .001        .024     .219  553             n/a                ||
|| Jun       .014      .003        .020     .185  626             n/a                ||
|| Jul       .017      .004        .021     .155  662             n/a                ||
|| Aug       .018      .002        .027     .210  714             n/a                ||
|| Sep       .036      .005        .059     .479  651             n/a                ||
|| Oct       .061      .017        .083     .655  740             n/a                ||
|| Nov       .076      .010        .101     .523  714             n/a                ||
|| Dec       .078      .016        .107     .600  740             n/a                ||
||------------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .003   .016   .055   .140   .221   .415   .724 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean      Std Dev                                             ||
|| 1992      .049      .006        .082     .724 8100             n/a                ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                         NO  Summary Statistics for 1992
                         Fort Saskatchewan Monitoring Station
                         Units are PPM (parts per million)
||------------------------------------------------------------------------------||
|| No regulations                                                               ||
||-----------------------------------BY SEASON----------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .000   .005   .026   .056   .082   .162   .274 ||
|| Spring   .000   .000   .000   .000   .001   .004   .010   .021   .034   .087   .144 ||
|| Summer   .000   .000   .000   .000   .000   .002   .004   .009   .014   .028   .089 ||
|| Autumn   .000   .000   .000   .000   .000   .003   .012   .044   .074   .130   .233 ||
||                                                                              ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                                        ||
|| Winter    .020       .000        .033    .274 1312            n/a            ||
|| Spring    .009       .001        .015    .144 2090            n/a            ||
|| Summer    .004       .000        .006    .089 2059            n/a            ||
|| Autumn    .014       .001        .028    .233 2071            n/a            ||
||-----------------------------------BY MONTH-----------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .000   .008   .040   .082   .119   .188   .274 ||
|| Feb      .000   .000   .000   .000   .000   .004   .017   .040   .051   .088   .181 ||
|| Mar      .000   .000   .000   .000   .001   .008   .020   .039   .068   .115   .144 ||
|| Apr      .000   .000   .000   .000   .001   .004   .009   .015   .019   .045   .076 ||
|| May      .000   .000   .000   .000   .001   .003   .006   .010   .013   .033   .065 ||
|| Jun      .000   .000   .000   .000   .000   .002   .004   .007   .012   .024   .086 ||
|| Jul      .000   .000   .000   .000   .000   .002   .005   .008   .013   .028   .089 ||
|| Aug      .000   .000   .000   .000   .000   .001   .005   .012   .017   .030   .040 ||
|| Sep      .000   .000   .000   .000   .000   .004   .011   .025   .045   .098   .144 ||
|| Oct      .000   .000   .000   .000   .001   .004   .012   .033   .059   .105   .179 ||
|| Nov      .000   .000   .000   .000   .000   .002   .017   .074   .102   .201   .233 ||
|| Dec        *      *      *      *      *      *      *      *      *      *      *  ||
||                                                                              ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                                        ||
|| Jan       .027       .001        .042    .274  621            n/a            ||
|| Feb       .013       .001        .020    .181  691            n/a            ||
|| Mar       .016       .002        .023    .144  677            n/a            ||
|| Apr       .006       .001        .009    .076  693            n/a            ||
|| May       .005       .001        .006    .065  720            n/a            ||
|| Jun       .003       .000        .006    .086  716            n/a            ||
|| Jul       .004       .000        .006    .089  728            n/a            ||
|| Aug       .004       .000        .006    .040  615            n/a            ||
|| Sep       .010       .000        .017    .144  612            n/a            ||
|| Oct       .012       .001        .021    .179  744            n/a            ||
|| Nov       .020       .000        .039    .233  715            n/a            ||
|| Dec         *          *           *       *     *              *            ||
||------------------------------------BY YEAR-----------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .000   .003   .010   .028   .053   .116   .274 ||
||                                                                              ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                                        ||
|| 1992      .011       .000        .023    .274 7532            n/a            ||
||------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                              NO  Summary Statistics for 1992
                              Fort McMurray Monitoring Station
                              Units are PPM (parts per million)
||--------------------------------------------------------------------------------------||
|| No regulations                                                                       ||
||-------------------------------------BY SEASON----------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX  ||
|| Winter   .000   .000   .000   .000   .001   .005   .016   .044   .075   .181   .334  ||
|| Spring   .000   .000   .000   .000   .000   .000   .003   .006   .014   .059   .137  ||
|| Summer   .000   .000   .000   .000   .002   .003   .005   .007   .010   .016   .028  ||
|| Autumn   .000   .000   .000   .000   .001   .004   .013   .038   .063   .116   .190  ||
||                                                                                      ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                                                ||
|| Winter    .016       .001        .032    .334 2089              n/a                   ||
|| Spring    .003       .000        .010    .137 1880              n/a                   ||
|| Summer    .004       .002        .003    .028  909              n/a                   ||
|| Autumn    .013       .001        .024    .190 1255              n/a                   ||
||-------------------------------------BY MONTH-----------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX  ||
|| Jan      .000   .000   .000   .000   .003   .009   .020   .060   .104   .200   .334  ||
|| Feb      .000   .000   .000   .000   .000   .001   .010   .037   .071   .207   .244  ||
|| Mar      .000   .000   .000   .000   .000   .000   .002   .016   .041   .096   .137  ||
|| Apr      .000   .000   .000   .000   .000   .000   .001   .004   .007   .033   .085  ||
|| May      .000   .000   .000   .000   .000   .002   .004   .006   .010   .029   .049  ||
|| Jun      .000   .000   .000   .000   .002   .003   .005   .008   .010   .016   .028  ||
|| Jul      .000   .000   .000   .000   .002   .003   .004   .006   .007   .012   .028  ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *   ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *   ||
|| Oct      .000   .000   .000   .000   .001   .005   .013   .037   .064   .152   .190  ||
|| Nov      .000   .000   .000   .000   .001   .003   .013   .040   .062   .105   .180  ||
|| Dec      .000   .000   .000   .001   .002   .007   .018   .039   .053   .094   .177  ||
||                                                                                      ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                                                ||
|| Jan       .022       .003        .041    .334  651              n/a                   ||
|| Feb       .013       .000        .033    .244  694              n/a                   ||
|| Mar       .006       .000        .018    .137  429              n/a                   ||
|| Apr       .002       .000        .007    .085  711              n/a                   ||
|| May       .003       .000        .005    .049  740              n/a                   ||
|| Jun       .004       .002        .003    .028  717              n/a                   ||
|| Jul       .003       .002        .003    .028  192              n/a                   ||
|| Aug         *          *           *       *     *               *                    ||
|| Sep         *          *           *       *     *               *                    ||
|| Oct       .013       .002        .025    .190  538              n/a                   ||
|| Nov       .012       .001        .023    .180  717              n/a                   ||
|| Dec       .014       .004        .020    .177  744              n/a                   ||
||--------------------------------------BY YEAR-----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX  ||
|| 1992     .000   .000   .000   .000   .000   .003   .008   .024   .047   .121   .334  ||
||                                                                                      ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                                                ||
|| 1992      .010       .000        .023    .334 6133              n/a                   ||
||--------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

Annual Average Concentration
Year: 1992
Pollutant: NO [ppm]

Year	EDMU	ERMU	EIMU	CDMU	CRMU	CIMU	Fort Sask.	Fort McMurray
1976	**	**	**	**	**	**	*	**
1977	**	**	**	**	**	**	*	*
1978	**	**	**	**	**	**	*	*
1979	**	**	**	**	**	**	*	**a
1980	**	**	**	*	**	**	*	b
1981	**	**	**	**	**	**	b	**
1982	**	**	**	**	**	**	**	**
1983	**	**	**	**	**	**	**	**
1984	**	**	**	**	**	**	**	**a
1985	**	**	**	**	**	**	**	**a
1986	**	**	**	**	**	**	**	**
1987	0.041	0.046	0.017	0.036	0.013	0.051	0.016	0.011
1988	0.036	0.036	0.017	0.039	0.013	0.056	0.013	0.010
1989	0.037	0.034	0.017	0.032	0.011	0.047	0.011a	0.009
1990	0.034	0.037	0.020	0.029	0.010	0.043	0.012	0.012
1991	0.035	0.042	0.023	0.034	0.012	0.049	0.013	0.010
1992	0.033	0.036	0.020	0.031	0.012	0.049	0.011	0.010

a 50% to 75% of data available
b less than 50% of data available
** annual average not calculated
* no data available

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                                NOX Summary Statistics for 1992
                                Edmonton Central Monitoring Station
                                Units are PPM (parts per million)
||---------------------------------------------------------------------------------||
|| No regulations                                                                  ||
||-------------------------------------BY SEASON-----------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .009    .015    .024    .030    .044    .069    .108    .159    .199    .324    .513 ||
|| Spring   .003    .008    .013    .016    .025    .038    .057    .086    .116    .195    .444 ||
|| Summer   .002    .006    .010    .012    .019    .031    .043    .058    .071    .110    .171 ||
|| Autumn   .005    .008    .015    .019    .029    .047    .073    .119    .155    .284    .593 ||
||                                                                                 ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean       Mean     Std Dev                                           ||
|| Winter     .086       .069        .062    .504 2154              n/a           ||
|| Spring     .047       .038        .037    .441 2194              n/a           ||
|| Summer     .034       .029        .021    .169 2195              n/a           ||
|| Autumn     .061       .047        .052    .588 2111              n/a           ||
||-------------------------------------BY MONTH------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .013    .019    .026    .031    .045    .069    .107    .159    .197    .332    .462 ||
|| Feb      .015    .019    .024    .031    .045    .067    .108    .160    .202    .371    .513 ||
|| Mar      .010    .013    .019    .022    .034    .052    .078    .127    .155    .264    .444 ||
|| Apr      .005    .010    .015    .017    .025    .038    .053    .074    .090    .141    .323 ||
|| May      .003    .006    .010    .013    .018    .029    .041    .056    .066    .111    .175 ||
|| Jun      .002    .004    .009    .011    .018    .029    .040    .052    .067    .094    .119 ||
|| Jul      .007    .008    .011    .014    .020    .031    .042    .062    .077    .113    .164 ||
|| Aug      .006    .007    .010    .012    .020    .032    .046    .060    .076    .120    .171 ||
|| Sep      .005    .008    .011    .015    .025    .038    .058    .106    .136    .225    .593 ||
|| Oct      .007    .010    .016    .019    .029    .046    .073    .121    .164    .324    .525 ||
|| Nov      .009    .013    .020    .023    .036    .056    .082    .128    .162    .264    .318 ||
|| Dec      .009    .011    .022    .028    .041    .070    .109    .159    .201    .321    .410 ||
||                                                                                 ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean       Mean     Std Dev                                           ||
|| Jan        .085       .070        .060    .449  735              n/a           ||
|| Feb        .087       .070        .066    .498  693              n/a           ||
|| Mar        .065       .052        .049    .434  740              n/a           ||
|| Apr        .044       .037        .028    .318  712              n/a           ||
|| May        .033       .028        .020    .172  742              n/a           ||
|| Jun        .031       .026        .018    .117  717              n/a           ||
|| Jul        .035       .030        .021    .157  741              n/a           ||
|| Aug        .036       .030        .022    .165  737              n/a           ||
|| Sep        .051       .039        .047    .588  659              n/a           ||
|| Oct        .062       .047        .057    .518  738              n/a           ||
|| Nov        .068       .055        .048    .309  714              n/a           ||
|| Dec        .085       .068        .060    .401  726              n/a           ||
||-------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .002    .008    .013    .017    .027    .042    .068    .113    .149    .258    .593 ||
||                                                                                 ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean       Mean     Std Dev                                           ||
|| 1992       .057       .043        .049    .591 8654              n/a           ||
||---------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                          NOX Summary Statistics for 1992
                          Edmonton Northwest Monitoring Station
                          Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| No regulations                                                                    ||
||------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .002   .004   .008   .015   .029   .061   .122   .207   .288   .461   .673 ||
|| Spring   .001   .003   .006   .009   .016   .026   .047   .105   .154   .256   .529 ||
|| Summer   .001   .003   .005   .007   .012   .018   .030   .053   .073   .124   .278 ||
|| Autumn   .001   .003   .007   .012   .020   .036   .079   .162   .231   .494   .950 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range  N      Number of Exceedances       ||
||           Mean       Mean      Std Dev                                            ||
|| Winter    .092       .057         .093     .671 2177            n/a               ||
|| Spring    .044       .028         .053     .528 2192            n/a               ||
|| Summer    .026       .019         .024     .277 2196            n/a               ||
|| Autumn    .069       .040         .093     .949 2177            n/a               ||
||------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .003   .005   .010   .017   .034   .074   .156   .264   .326   .512   .673 ||
|| Feb      .003   .005   .011   .017   .029   .059   .114   .186   .239   .431   .541 ||
|| Mar      .003   .003   .008   .013   .023   .042   .092   .166   .217   .397   .529 ||
|| Apr      .002   .003   .006   .009   .015   .024   .037   .067   .102   .180   .278 ||
|| May      .001   .002   .006   .008   .014   .021   .035   .054   .080   .144   .212 ||
|| Jun      .003   .003   .005   .007   .011   .016   .024   .038   .051   .073   .098 ||
|| Jul      .002   .003   .005   .007   .013   .019   .033   .052   .069   .120   .158 ||
|| Aug      .001   .002   .004   .006   .012   .021   .036   .072   .098   .148   .278 ||
|| Sep      .002   .003   .006   .010   .018   .029   .065   .135   .192   .407   .847 ||
|| Oct      .001   .004   .008   .012   .021   .037   .075   .148   .233   .688   .950 ||
|| Nov      .003   .003   .008   .013   .025   .047   .105   .188   .257   .348   .627 ||
|| Dec      .002   .003   .006   .010   .025   .052   .103   .166   .243   .471   .600 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range  N      Number of Exceedances       ||
||           Mean       Mean      Std Dev                                            ||
|| Jan       .111       .069         .107     .670  740            n/a               ||
|| Feb       .085       .056         .081     .538  696            n/a               ||
|| Mar       .070       .043         .075     .526  739            n/a               ||
|| Apr       .034       .024         .035     .276  712            n/a               ||
|| May       .029       .021         .026     .211  741            n/a               ||
|| Jun       .020       .016         .014     .095  719            n/a               ||
|| Jul       .026       .020         .022     .156  739            n/a               ||
|| Aug       .031       .021         .031     .277  738            n/a               ||
|| Sep       .058       .033         .083     .845  720            n/a               ||
|| Oct       .071       .040         .109     .949  741            n/a               ||
|| Nov       .078       .048         .082     .624  716            n/a               ||
|| Dec       .079       .047         .086     .598  741            n/a               ||
||------------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .001   .003   .006   .009   .017   .030   .067   .140   .198   .371   .950 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range  N      Number of Exceedances       ||
||           Mean       Mean      Std Dev                                            ||
|| 1992      .058       .033         .076     .949 8742            n/a               ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                          NOX Summary Statistics for 1992
                          Edmonton East Monitoring Station
                          Units are PPM (parts per million)
||---------------------------------------------------------------------------------||
|| No regulations                                                                  ||
||-------------------------------------BY SEASON-----------------------------------||
|| SEASON    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .001    .005    .008    .016    .034    .072    .130    .167    .247    .471 ||
|| Spring   .000    .007    .010    .012    .017    .024    .036    .062    .091    .160    .281 ||
|| Summer   .000    .002    .007    .010    .017    .025    .037    .052    .070    .108    .189 ||
|| Autumn   .000    .001    .006    .008    .016    .028    .052    .096    .139    .226    .354 ||
||                                                                                 ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean       Mean     Std Dev                                           ||
|| Winter    .054       .029        .056     .471 2099             n/a             ||
|| Spring    .033       .025        .029     .281 2181             n/a             ||
|| Summer    .030       .024        .020     .189 1907             n/a             ||
|| Autumn    .043       .027        .045     .354 2181             n/a             ||
||-------------------------------------BY MONTH------------------------------------||
|| MONTH     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .004    .007    .014    .032    .080    .150    .204    .291    .471 ||
|| Feb      .000    .001    .004    .006    .013    .036    .074    .131    .160    .215    .429 ||
|| Mar      .007    .008    .012    .014    .020    .031    .049    .092    .131    .200    .281 ||
|| Apr      .000    .008    .014    .015    .018    .026    .037    .058    .078    .116    .149 ||
|| May      .000    .006    .008    .010    .014    .019    .027    .036    .047    .098    .193 ||
|| Jun      .004    .007    .010    .012    .016    .022    .030    .039    .051    .076    .094 ||
|| Jul      .000    .001    .006    .008    .015    .023    .036    .056    .077    .115    .128 ||
|| Aug      .002    .002    .006    .009    .021    .031    .042    .059    .083    .117    .189 ||
|| Sep      .002    .006    .012    .015    .019    .027    .043    .072    .090    .163    .234 ||
|| Oct      .000    .001    .003    .005    .010    .024    .047    .096    .148    .250    .354 ||
|| Nov      .002    .004    .007    .009    .015    .034    .072    .129    .155    .241    .293 ||
|| Dec      .001    .005    .008    .012    .019    .033    .065    .110    .145    .235    .311 ||
||                                                                                 ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean       Mean     Std Dev                                           ||
|| Jan       .058       .026        .065     .471  731             n/a             ||
|| Feb       .053       .029        .054     .429  634             n/a             ||
|| Mar       .044       .033        .039     .274  729             n/a             ||
|| Apr       .032       .027        .021     .149  713             n/a             ||
|| May       .022       .019        .016     .193  739             n/a             ||
|| Jun       .024       .022        .013     .090  638             n/a             ||
|| Jul       .029       .021        .022     .128  528             n/a             ||
|| Aug       .035       .027        .023     .187  741             n/a             ||
|| Sep       .036       .029        .029     .232  720             n/a             ||
|| Oct       .040       .021        .049     .354  744             n/a             ||
|| Nov       .052       .033        .051     .291  717             n/a             ||
|| Dec       .050       .035        .046     .310  734             n/a             ||
||-------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .002    .007    .010    .016    .027    .046    .087    .126    .212    .471 ||
||                                                                                 ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean       Mean     Std Dev                                           ||
|| 1992      .040       .026        .041     .471 8368             n/a             ||
||---------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                    NOX Summary Statistics for 1992
                    Calgary Downtown Monitoring Station
                    Units are PPM (parts per million)
||---------------------------------------------------------------------------------||
|| No regulations                                                                  ||
||-----------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .009   .016   .024   .031   .045   .072   .117   .208   .288   .442   .769 ||
|| Spring   .007   .010   .013   .016   .024   .037   .057   .090   .118   .219   .425 ||
|| Summer   .007   .010   .013   .016   .022   .032   .046   .067   .081   .119   .245 ||
|| Autumn   .007   .011   .017   .021   .031   .049   .083   .138   .184   .310   .500 ||
||                                                                                 ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean      Mean     Std Dev                                            ||
|| Winter     .099      .075       .088     .760 2161              n/a             ||
|| Spring     .047      .037       .040     .418 2174              n/a             ||
|| Summer     .037      .032       .022     .238 2187              n/a             ||
|| Autumn     .068      .052       .058     .493 2170              n/a             ||
||-----------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .009   .014   .021   .029   .041   .071   .118   .217   .286   .465   .769 ||
|| Feb      .010   .017   .024   .030   .047   .075   .120   .199   .276   .422   .553 ||
|| Mar      .012   .015   .019   .022   .032   .047   .076   .117   .159   .255   .425 ||
|| Apr      .008   .010   .014   .016   .022   .034   .054   .084   .116   .208   .351 ||
|| May      .007   .009   .011   .013   .019   .030   .045   .060   .078   .105   .208 ||
|| Jun      .009   .010   .013   .015   .022   .031   .042   .067   .078   .116   .164 ||
|| Jul      .010   .012   .015   .017   .023   .033   .047   .065   .076   .104   .146 ||
|| Aug      .007   .009   .013   .016   .022   .033   .046   .069   .087   .132   .245 ||
|| Sep      .008   .010   .015   .019   .026   .039   .062   .113   .174   .299   .400 ||
|| Oct      .007   .011   .016   .021   .033   .052   .079   .126   .163   .264   .416 ||
|| Nov      .012   .015   .020   .026   .038   .063   .103   .152   .204   .362   .500 ||
|| Dec      .015   .019   .026   .033   .047   .071   .113   .206   .305   .444   .717 ||
||                                                                                 ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean      Mean     Std Dev                                            ||
|| Jan        .099      .072       .093     .760  737              n/a             ||
|| Feb        .099      .076       .081     .543  689              n/a             ||
|| Mar        .063      .050       .049     .413  728              n/a             ||
|| Apr        .045      .036       .038     .343  710              n/a             ||
|| May        .035      .029       .023     .201  736              n/a             ||
|| Jun        .036      .031       .022     .155  712              n/a             ||
|| Jul        .038      .033       .020     .136  740              n/a             ||
|| Aug        .039      .033       .025     .238  735              n/a             ||
|| Sep        .056      .042       .053     .392  716              n/a             ||
|| Oct        .066      .052       .052     .409  739              n/a             ||
|| Nov        .081      .063       .064     .488  715              n/a             ||
|| Dec        .099      .076       .088     .702  735              n/a             ||
||-----------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .007   .010   .015   .019   .028   .044   .074   .123   .175   .346   .769 ||
||                                                                                 ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances    ||
||           Mean      Mean     Std Dev                                            ||
|| 1992       .063      .046       .062     .762 8692              n/a             ||
||---------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                         NOX Summary Statistics for 1992
                         Calgary Residential Monitoring Station
                         Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| No regulations                                                                     ||
||------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .003    .005    .008    .010    .017    .031    .056    .105    .148    .292    .557 ||
|| Spring   .003    .003    .004    .006    .009    .014    .024    .040    .058    .114    .352 ||
|| Summer   .002    .002    .004    .005    .007    .011    .017    .025    .033    .060    .130 ||
|| Autumn   .002    .003    .005    .007    .011    .020    .035    .063    .094    .219    .539 ||
||                                                                                    ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                                              ||
|| Winter    .047       .031         .052     .556 2126             n/a               ||
|| Spring    .021       .015         .024     .352 2073             n/a               ||
|| Summer    .014       .011         .011     .130 2010             n/a               ||
|| Autumn    .031       .021         .039     .537 2154             n/a               ||
||------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .003    .005    .007    .009    .015    .027    .054    .105    .165    .331    .557 ||
|| Feb      .002    .003    .008    .010    .017    .031    .060    .116    .161    .277    .341 ||
|| Mar      .003    .004    .006    .008    .012    .020    .034    .058    .086    .193    .352 ||
|| Apr      .003    .003    .004    .006    .008    .012    .020    .034    .046    .094    .128 ||
|| May      .003    .003    .004    .004    .007    .011    .017    .026    .035    .065    .090 ||
|| Jun      .003    .003    .005    .005    .008    .011    .016    .024    .027    .038    .058 ||
|| Jul      .002    .003    .005    .006    .008    .011    .017    .026    .037    .054    .078 ||
|| Aug      .002    .002    .003    .004    .007    .011    .018    .028    .038    .093    .130 ||
|| Sep      .002    .002    .004    .006    .009    .014    .024    .047    .066    .175    .283 ||
|| Oct      .002    .004    .006    .008    .013    .020    .034    .066    .094    .167    .286 ||
|| Nov      .003    .004    .007    .009    .015    .028    .044    .075    .113    .281    .539 ||
|| Dec      .003    .005    .009    .012    .021    .034    .055    .097    .133    .237    .389 ||
||                                                                                    ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                                              ||
|| Jan       .047       .029         .059     .556  725             n/a               ||
|| Feb       .049       .032         .052     .339  663             n/a               ||
|| Mar       .030       .021         .034     .349  727             n/a               ||
|| Apr       .017       .013         .016     .125  714             n/a               ||
|| May       .014       .011         .011     .090  632             n/a               ||
|| Jun       .013       .011         .008     .058  712             n/a               ||
|| Jul       .014       .012         .010     .077  559             n/a               ||
|| Aug       .015       .011         .015     .130  739             n/a               ||
|| Sep       .023       .015         .030     .281  697             n/a               ||
|| Oct       .030       .021         .033     .284  741             n/a               ||
|| Nov       .040       .027         .050     .536  716             n/a               ||
|| Dec       .047       .034         .045     .386  738             n/a               ||
||------------------------------------ BY YEAR--------------------------------------||
|| YEAR      MIN     1%      5%     10%      5%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .002    .003    .005    .006     10     .017    .032    .059    .091    .195    .557 ||
||                                                                                    ||
|| YEAR   Arithmetic Geometric Arithmet    Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                                              ||
|| 1992      .029       .018         .038     .557 8363             n/a               ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                                     NOX Summary Statistics for 1992
                                     Calgary Industrial Monitoring Station
                                     Units are PPM (parts per million)
||--------------------------------------------------------------------------------------||
|| No regulations                                                                       ||
||-------------------------------------BY SEASON----------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .003   .007   .012   .016   .034   .075   .157   .286   .381   .569   .794 ||
|| Spring   .002   .003   .007   .009   .017   .034   .065   .117   .164   .316   .460 ||
|| Summer   .002   .003   .007   .010   .016   .030   .048   .072   .096   .143   .254 ||
|| Autumn   .002   .004   .008   .011   .023   .052   .107   .196   .287   .465   .705 ||
||                                                                                      ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean      Mean     Std Dev                                                 ||
|| Winter    .118      .071        .123     .791 2161             n/a                   ||
|| Spring    .053      .033        .058     .458 1832             n/a                   ||
|| Summer    .037      .028        .030     .253 2002             n/a                   ||
|| Autumn    .083      .049        .092     .703 2105             n/a                   ||
||-------------------------------------BY MONTH-----------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .003   .005   .010   .013   .030   .081   .178   .319   .409   .620   .794 ||
|| Feb      .005   .008   .013   .019   .040   .081   .158   .271   .364   .604   .769 ||
|| Mar      .006   .008   .012   .017   .026   .048   .092   .158   .238   .355   .396 ||
|| Apr      .003   .005   .007   .008   .014   .032   .059   .106   .134   .296   .460 ||
|| May      .002   .003   .005   .007   .011   .024   .038   .067   .090   .179   .265 ||
|| Jun      .004   .006   .010   .012   .017   .032   .050   .073   .097   .149   .219 ||
|| Jul      .004   .005   .009   .012   .019   .030   .047   .069   .085   .137   .193 ||
|| Aug      .002   .002   .005   .007   .014   .028   .047   .076   .102   .148   .254 ||
|| Sep      .002   .003   .005   .008   .016   .034   .069   .137   .202   .335   .534 ||
|| Oct      .005   .006   .010   .014   .030   .059   .107   .194   .268   .467   .705 ||
|| Nov      .004   .005   .009   .012   .026   .068   .134   .254   .351   .495   .584 ||
|| Dec      .005   .008   .012   .017   .032   .064   .139   .274   .364   .547   .696 ||
||                                                                                      ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean      Mean     Std Dev                                                 ||
|| Jan       .127      .072        .134     .791  734             n/a                   ||
|| Feb       .118      .076        .118     .764  687             n/a                   ||
|| Mar       .073      .050        .071     .390  732             n/a                   ||
|| Apr       .046      .030        .051     .457  547             n/a                   ||
|| May       .031      .021        .031     .263  553             n/a                   ||
|| Jun       .039      .030        .029     .215  626             n/a                   ||
|| Jul       .036      .029        .026     .189  662             n/a                   ||
|| Aug       .036      .025        .033     .253  714             n/a                   ||
|| Sep       .057      .033        .067     .532  651             n/a                   ||
|| Oct       .087      .056        .089     .700  740             n/a                   ||
|| Nov       .104      .060        .109     .580  714             n/a                   ||
|| Dec       .109      .067        .117     .691  740             n/a                   ||
||--------------------------------------BY YEAR-----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .002   .004   .008   .011   .021   .042   .088   .178   .265   .465   .794 ||
||                                                                                      ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean      Mean     Std Dev                                                 ||
|| 1992      .074      .043        .091     .793 8100             n/a                   ||
||--------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                              NOX Summary Statistics for 1992
                              Fort Saskatchewan Monitoring Station
                              Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| No regulations                                                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .000    .000    .005    .021    .056    .094    .124    .221    .322 ||
|| Spring   .000    .000    .000    .000    .003    .008    .018    .041    .061    .116    .191 ||
|| Summer   .000    .000    .000    .000    .002    .005    .010    .020    .027    .046    .096 ||
|| Autumn   .000    .000    .001    .001    .003    .011    .028    .069    .100    .176    .276 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                                               ||
|| Winter    .038       .006        .046     .322 1313               n/a               ||
|| Spring    .016       .003        .023     .191 2088               n/a               ||
|| Summer    .008       .002        .010     .096 2059               n/a               ||
|| Autumn    .025       .007        .036     .276 2071               n/a               ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .000    .000    .003    .028    .075    .117    .165    .259    .322 ||
|| Feb      .000    .000    .001    .001    .007    .017    .044    .076    .095    .136    .216 ||
|| Mar      .000    .000    .001    .001    .007    .016    .037    .070    .098    .156    .191 ||
|| Apr      .000    .000    .000    .000    .002    .006    .014    .025    .036    .075    .098 ||
|| May      .000    .000    .000    .000    .003    .007    .012    .021    .031    .059    .102 ||
|| Jun      .000    .000    .000    .000    .002    .005    .009    .017    .024    .040    .096 ||
|| Jul      .000    .000    .000    .000    .002    .006    .010    .020    .027    .044    .091 ||
|| Aug      .000    .000    .001    .001    .002    .006    .013    .023    .032    .049    .059 ||
|| Sep      .000    .000    .000    .001    .002    .010    .025    .051    .070    .141    .182 ||
|| Oct      .000    .000    .001    .002    .005    .012    .026    .059    .083    .133    .226 ||
|| Nov      .000    .000    .000    .001    .003    .010    .038    .103    .140    .244    .276 ||
|| Dec         *       *       *       *       *       *       *       *       *       *       * ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                                               ||
|| Jan       .048       .004        .056     .322  620               n/a               ||
|| Feb       .030       .010        .032     .216  693               n/a               ||
|| Mar       .028       .009        .033     .191  676               n/a               ||
|| Apr       .011       .002        .014     .098  693               n/a               ||
|| May       .010       .002        .012     .102  719               n/a               ||
|| Jun       .007       .002        .009     .096  716               n/a               ||
|| Jul       .008       .002        .010     .091  728               n/a               ||
|| Aug       .009       .004        .010     .059  615               n/a               ||
|| Sep       .019       .005        .026     .182  612               n/a               ||
|| Oct       .022       .009        .028     .226  744               n/a               ||
|| Nov       .032       .007        .048     .276  715               n/a               ||
|| Dec         *          *           *        *    *                 *                ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .000    .000    .000    .003    .008    .022    .054    .085    .158    .322 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                                               ||
|| 1992      .020       .004        .032     .322 7531               n/a               ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable         * - no data
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                    NOX Summary Statistics for 1992
                    Fort McMurray Monitoring Station
                    Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| No regulations                                                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .001   .007   .018   .035   .067   .106   .227   .372 ||
|| Spring   .000   .000   .000   .000   .001   .004   .010   .022   .038   .096   .188 ||
|| Summer   .000   .000   .000   .001   .003   .005   .009   .014   .019   .029   .046 ||
|| Autumn   .000   .000   .001   .002   .005   .013   .028   .059   .084   .138   .216 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                                              ||
|| Winter    .030       .008        .041     .372 2089             n/a                 ||
|| Spring    .009       .001        .017     .188 1880             n/a                 ||
|| Summer    .007       .003        .006     .046  909             n/a                 ||
|| Autumn    .023       .010        .029     .216 1070             n/a                 ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .002   .010   .020   .040   .090   .145   .250   .372 ||
|| Feb      .000   .000   .000   .000   .003   .012   .029   .063   .110   .265   .290 ||
|| Mar      .000   .000   .000   .000   .000   .006   .016   .042   .074   .146   .188 ||
|| Apr      .000   .000   .000   .000   .001   .003   .007   .016   .025   .062   .145 ||
|| May      .000   .000   .000   .000   .001   .005   .010   .020   .029   .057   .085 ||
|| Jun      .000   .000   .000   .001   .003   .005   .010   .015   .020   .031   .046 ||
|| Jul      .000   .000   .000   .000   .003   .005   .007   .011   .014   .023   .030 ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *  ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *  ||
|| Oct      .000   .001   .002   .003   .007   .015   .031   .059   .086   .177   .216 ||
|| Nov      .000   .000   .001   .002   .005   .012   .027   .059   .084   .124   .202 ||
|| Dec      .000   .000   .002   .004   .009   .020   .036   .060   .076   .127   .214 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                                              ||
|| Jan       .037       .010        .050     .372  651             n/a                 ||
|| Feb       .026       .003        .043     .290  694             n/a                 ||
|| Mar       .016       .001        .027     .188  429             n/a                 ||
|| Apr       .007       .001        .013     .145  711             n/a                 ||
|| May       .008       .001        .011     .085  740             n/a                 ||
|| Jun       .007       .003        .006     .046  717             n/a                 ||
|| Jul       .006       .002        .004     .030  192             n/a                 ||
|| Aug        *          *           *        *     *               *                  ||
|| Sep        *          *           *        *     *               *                  ||
|| Oct       .025       .013        .031     .216  353             n/a                 ||
|| Nov       .022       .009        .028     .202  717             n/a                 ||
|| Dec       .027       .015        .026     .214  744             n/a                 ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .003   .009   .021   .045   .072   .159   .372 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean      Std Dev                                              ||
|| 1992      .019       .003        .031     .372 5948             n/a                 ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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Annual Average Concentration
Year: 1992
Pollutant: NOX [ppm]

Year	EDMU	ERMU	EIMU	CDMU	CRMU	CIMU	Fort Sask.	Fort McMurray
1976	**	**	**	**	**	**	*	**
1977	**	**	**	**	**	**	*	*
1978	**	**	**	**	**	**	*	*
1979	**	**	**	**	**	**	*	**a
1980	**	**	**	**	**	**	*	b
1981	**	**	**	**	**	**	b	**
1982	**	**	**	**	**	**	**	**
1983	**	**	**	**	**	**	**	**
1984	**	**	**	**	**	**	**	**a
1985	**	**	**	**	**	**	**	**a
1986	**	**	**	**	**	**	**	**
1987	0.071	0.066	0.032	0.070	0.032	0.076	0.030	0.020
1988	0.063	0.055	0.032	0.075	0.032	0.082	0.026	0.019
1989	0.061	0.054	0.032	0.067	0.031	0.075	0.020a	0.018
1990	0.060	0.062	0.038	0.062	0.027	0.070	0.025	0.022
1991	0.062	0.067	0.044	0.071	0.030	0.076	0.025	0.019
1992	0.057	0.058	0.040	0.063	0.029	0.074	0.020	0.019

a 50% to 75% of data available
b less than 50% data available
** annual average not calculated
* no data available

```
                         O3  Summary Statistics for 1992
                         Edmonton Central Monitoring Station
                         Units are PPM (parts per million)
||------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =    .082 PPM                               ||
|| Ambient 24-hour average regulation =    .025 PPM                              ||
||------------------------------------BY SEASON---------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .001    .002    .003    .006    .013    .019    .023    .031    .036 ||
|| Spring   .000    .001    .002    .005    .012    .023    .033    .040    .045    .052    .063 ||
|| Summer   .001    .002    .004    .006    .013    .023    .032    .040    .045    .055    .070 ||
|| Autumn   .001    .001    .001    .002    .004    .008    .017    .024    .028    .034    .046 ||
||                                                                              ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                   1 hour      24 hour   ||
|| Winter    .009       .005        .007     .036 2180     0(0.00%)     0(0.00%)  ||
|| Spring    .023       .017        .013     .063 2202     0(0.00%)    35(38.04%) ||
|| Summer    .023       .019        .013     .069 2203     0(0.00%)    32(34.78%) ||
|| Autumn    .011       .007        .009     .045 2177     0(0.00%)     1(1.10%)  ||
||------------------------------------BY MONTH----------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .001    .001    .002    .003    .005    .012    .018    .021    .030    .035 ||
|| Feb      .000    .001    .001    .002    .003    .008    .015    .020    .023    .028    .033 ||
|| Mar      .000    .001    .002    .002    .006    .015    .025    .034    .037    .044    .050 ||
|| Apr      .001    .002    .004    .007    .014    .024    .033    .039    .041    .046    .050 ||
|| May      .001    .002    .007    .012    .019    .028    .038    .046    .050    .056    .063 ||
|| Jun      .002    .004    .007    .010    .017    .027    .035    .042    .047    .059    .066 ||
|| Jul      .001    .001    .004    .006    .012    .021    .030    .037    .042    .053    .057 ||
|| Aug      .001    .001    .003    .005    .010    .020    .030    .041    .045    .055    .070 ||
|| Sep      .001    .001    .002    .002    .005    .011    .019    .024    .027    .033    .040 ||
|| Oct      .001    .001    .001    .002    .004    .010    .019    .026    .030    .035    .046 ||
|| Nov      .001    .001    .001    .002    .003    .005    .010    .018    .024    .035    .039 ||
|| Dec      .000    .000    .001    .001    .002    .005    .012    .019    .025    .033    .036 ||
||                                                                              ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                   1 hour      24 hour   ||
|| Jan       .008       .005        .007     .035  742     0(0.00%)     0(0.00%)  ||
|| Feb       .010       .006        .007     .033  696     0(0.00%)     0(0.00%)  ||
|| Mar       .016       .011        .012     .050  742     0(0.00%)     3(9.68%)  ||
|| Apr       .024       .019        .012     .049  716     0(0.00%)    12(40.00%) ||
|| May       .029       .025        .013     .062  744     0(0.00%)    20(64.52%) ||
|| Jun       .026       .023        .012     .064  720     0(0.00%)    17(56.67%) ||
|| Jul       .022       .017        .012     .056  742     0(0.00%)     6(19.35%) ||
|| Aug       .021       .016        .013     .069  741     0(0.00%)     9(29.03%) ||
|| Sep       .012       .009        .008     .039  717     0(0.00%)     0(0.00%)  ||
|| Oct       .012       .008        .010     .045  742     0(0.00%)     0(0.00%)  ||
|| Nov       .008       .005        .007     .038  718     0(0.00%)     1(3.33%)  ||
|| Dec       .008       .004        .008     .036  742     0(0.00%)     0(0.00%)  ||
||-------------------------------------BY YEAR----------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .001    .002    .002    .005    .014    .025    .035    .040    .050    .070 ||
||                                                                              ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean     Std Dev                   1 hour      24 hour   ||
|| 1992      .016       .010        .013     .070 8762     0(0.00%)    68(18.58%) ||
||------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                          O3  Summary Statistics for 1992
                          Edmonton Northwest Monitoring Station
                          Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .082 PPM                                    ||
|| Ambient 24-hour average regulation =   .025 PPM                                   ||
||-------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .001   .006   .016   .025   .029   .036   .040 ||
|| Spring   .000   .000   .000   .001   .009   .024   .036   .043   .047   .055   .063 ||
|| Summer   .000   .000   .001   .004   .013   .024   .037   .047   .052   .064   .075 ||
|| Autumn   .000   .000   .000   .000   .002   .008   .020   .028   .033   .041   .063 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean    Std Dev                    1 hour      24 hour       ||
|| Winter    .009       .002        .010     .040 2180    0(0.00%)     1(1.10%)      ||
|| Spring    .023       .009        .015     .063 2170    0(0.00%)    39(43.33%)     ||
|| Summer    .025       .014        .016     .075 2192    0(0.00%)    42(46.15%)     ||
|| Autumn    .012       .003        .011     .063 2180    0(0.00%)     4(4.40%)      ||
||-------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .001   .004   .013   .024   .028   .036   .038 ||
|| Feb      .000   .000   .000   .000   .001   .010   .019   .026   .028   .035   .040 ||
|| Mar      .000   .000   .000   .000   .002   .016   .029   .039   .042   .047   .051 ||
|| Apr      .000   .000   .000   .002   .012   .024   .035   .041   .045   .051   .054 ||
|| May      .000   .000   .002   .007   .019   .031   .040   .047   .051   .061   .063 ||
|| Jun      .000   .001   .007   .012   .018   .028   .040   .048   .054   .065   .072 ||
|| Jul      .000   .000   .001   .003   .011   .021   .036   .045   .049   .060   .073 ||
|| Aug      .000   .000   .000   .002   .009   .022   .035   .048   .055   .067   .075 ||
|| Sep      .000   .000   .000   .000   .004   .013   .022   .028   .032   .037   .041 ||
|| Oct      .000   .000   .000   .000   .002   .010   .022   .031   .039   .050   .063 ||
|| Nov      .000   .000   .000   .000   .002   .005   .011   .021   .028   .036   .042 ||
|| Dec      .000   .001   .001   .001   .002   .005   .015   .024   .030   .036   .037 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean    Std Dev                    1 hour      24 hour       ||
|| Jan       .008       .001        .010     .038  742    0(0.00%)     1(3.23%)      ||
|| Feb       .011       .002        .010     .040  696    0(0.00%)     0(0.00%)      ||
|| Mar       .017       .003        .015     .051  742    0(0.00%)     5(16.13%)     ||
|| Apr       .023       .010        .014     .054  715    0(0.00%)    12(40.00%)     ||
|| May       .029       .019        .015     .063  713    0(0.00%)    22(75.86%)     ||
|| Jun       .029       .024        .014     .072  708    0(0.00%)    19(65.52%)     ||
|| Jul       .023       .012        .015     .073  742    0(0.00%)    11(35.48%)     ||
|| Aug       .024       .010        .017     .075  742    0(0.00%)    12(38.71%)     ||
|| Sep       .014       .004        .011     .041  720    0(0.00%)     0(0.00%)      ||
|| Oct       .014       .002        .013     .063  742    0(0.00%)     3(9.68%)      ||
|| Nov       .008       .002        .009     .042  718    0(0.00%)     1(3.33%)      ||
|| Dec       .009       .005        .009     .037  742    0(0.00%)     0(0.00%)      ||
||--------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .001   .004   .015   .028   .039   .045   .056   .075 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean    Std Dev                    1 hour      24 hour       ||
|| 1992      .017       .005        .015     .075 8722    0(0.00%)    86(23.69%)     ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                         Wind Summary for 1992
                  Edmonton Northwest Monitoring Station
  ** calculation is for exceedances of the 24-hour regulation for O3  **
||--------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                    ||
||                          Wind Speed (km/h)                         ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||   N       28    42    47    17     3     3     0     0     0   140 ||
||   NNE     18    48    37    18     1     0     0     0     0   122 ||
||   NE      18    40    44     8     2     0     0     0     0   112 ||
||   ENE     20    40    20     7     0     0     0     0     0    87 ||
||   E        7    32    22     8     1     0     0     0     0    70 ||
||   ESE     10    25    21    26     3     0     0     0     0    85 ||
||   SE      11    20    54    40    14     0     0     0     0   139 ||
||   SSE     10    21    46    61    27     2     0     0     0   167 ||
||   S       27    41    50    19     4     0     0     0     0   141 ||
||   SSW     26    46    19     7     2     0     0     0     0   100 ||
||   SW      22    38     7     0     0     0     0     0     0    67 ||
||   WSW     12    42    12     4     0     0     0     0     0    70 ||
||   W       23    66    53    23     3     0     0     0     0   168 ||
||   WNW     21    54    67    44    42    13     4     0     0   245 ||
||   NW      28    44    58    42    15     4     0     0     0   191 ||
||   NNW     27    36    40    26    16     2     0     0     0   147 ||
|| TOTAL    308   635   597   350   133    24     4     0     0  2051 ||
||                                                                    ||
|| CALM =     13 hours                                                ||
|| MISSING DATA =      0 hours                                        ||
||--------------------------------------------------------------------||
||  Joint Wind Direction and Speed Frequency Distribution (percent)   ||
||                                                                    ||
||                          Wind Speed (km/h)                         ||
||   Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL ||
||   N      1.4   2.0   2.3    .8    .1    .1    .0    .0    .0   6.8 ||
||   NNE     .9   2.3   1.8    .9    .0    .0    .0    .0    .0   5.9 ||
||   NE      .9   1.9   2.1    .4    .1    .0    .0    .0    .0   5.4 ||
||   ENE    1.0   1.9   1.0    .3    .0    .0    .0    .0    .0   4.2 ||
||   E       .3   1.6   1.1    .4    .0    .0    .0    .0    .0   3.4 ||
||   ESE     .5   1.2   1.0   1.3    .1    .0    .0    .0    .0   4.1 ||
||   SE      .5   1.0   2.6   1.9    .7    .0    .0    .0    .0   6.7 ||
||   SSE     .5   1.0   2.2   3.0   1.3    .1    .0    .0    .0   8.1 ||
||   S      1.3   2.0   2.4    .9    .2    .0    .0    .0    .0   6.8 ||
||   SSW    1.3   2.2    .9    .3    .1    .0    .0    .0    .0   4.8 ||
||   SW     1.1   1.8    .3    .0    .0    .0    .0    .0    .0   3.2 ||
||   WSW     .6   2.0    .6    .2    .0    .0    .0    .0    .0   3.4 ||
||   W      1.1   3.2   2.6   1.1    .1    .0    .0    .0    .0   8.1 ||
||   WNW    1.0   2.6   3.2   2.1   2.0    .6    .2    .0    .0  11.9 ||
||   NW     1.4   2.1   2.8   2.0    .7    .2    .0    .0    .0   9.3 ||
||   NNW    1.3   1.7   1.9   1.3    .8    .1    .0    .0    .0   7.1 ||
|| TOTAL   14.9  30.8  28.9  17.0   6.4   1.2    .2    .0    .0  99.4 ||
||                                                                    ||
|| CALM =    .63%                                                     ||
|| MISSING DATA =   .00%                                              ||
||--------------------------------------------------------------------||
                           O3  Summary Statistics for 1992
                           Edmonton East Monitoring Station
                           Units are PPM (parts per million)
||----------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .082 PPM                             ||
|| Ambient 24-hour average regulation =   .025 PPM                            ||
||-----------------------------------BY SEASON--------------------------------||
|| SEASON   MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter  .000   .000   .001   .001   .004   .012   .021   .027   .029   .035   .043 ||
|| Spring  .000   .001   .004   .009   .019   .029   .039   .046   .049   .056   .064 ||
|| Summer  .000   .001   .003   .007   .016   .027   .037   .046   .051   .064   .082 ||
|| Autumn  .000   .000   .001   .001   .005   .013   .021   .028   .031   .036   .052 ||
||                                                                            ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||          Mean       Mean      Std Dev                   1 hour      24 hour     ||
|| Winter    .013       .007        .010      .043 2174     0(0.00%)     5(5.49%)   ||
|| Spring    .029       .023        .014      .064 2118     0(0.00%)    58(67.44%)  ||
|| Summer    .027       .020        .015      .082 1955     0(0.00%)    48(60.00%)  ||
|| Autumn    .014       .006        .010      .052 2184     0(0.00%)     5(5.49%)   ||
||-----------------------------------BY MONTH---------------------------------||
|| MONTH    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan     .000   .001   .001   .001   .005   .013   .021   .026   .028   .034   .040 ||
|| Feb     .000   .000   .001   .001   .006   .015   .025   .029   .032   .036   .043 ||
|| Mar     .000   .001   .001   .002   .012   .024   .033   .040   .044   .049   .057 ||
|| Apr     .003   .004   .007   .012   .021   .031   .040   .047   .050   .057   .060 ||
|| May     .000   .002   .011   .016   .023   .033   .042   .048   .052   .058   .064 ||
|| Jun     .001   .002   .007   .012   .020   .031   .041   .049   .054   .070   .082 ||
|| Jul     .000   .000   .003   .006   .014   .025   .036   .044   .048   .057   .061 ||
|| Aug     .000   .000   .002   .005   .014   .023   .034   .046   .052   .064   .076 ||
|| Sep     .000   .000   .001   .002   .008   .015   .021   .027   .029   .033   .036 ||
|| Oct     .000   .000   .001   .001   .006   .015   .025   .030   .033   .046   .052 ||
|| Nov     .000   .000   .000   .001   .003   .009   .016   .024   .029   .034   .035 ||
|| Dec     .000   .000   .001   .001   .003   .010   .018   .025   .027   .030   .034 ||
||                                                                            ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||          Mean       Mean      Std Dev                   1 hour      24 hour     ||
|| Jan       .013       .008        .009      .040  740     0(0.00%)     1(3.23%)   ||
|| Feb       .015       .009        .010      .043  693     0(0.00%)     3(10.34%)  ||
|| Mar       .023       .016        .013      .057  691     0(0.00%)    13(48.15%)  ||
|| Apr       .030       .027        .013      .057  688     0(0.00%)    21(75.00%)  ||
|| May       .032       .028        .013      .064  739     0(0.00%)    24(77.42%)  ||
|| Jun       .031       .026        .014      .081  681     0(0.00%)    22(78.57%)  ||
|| Jul       .025       .017        .014      .061  532     0(0.00%)     9(42.86%)  ||
|| Aug       .025       .016        .015      .076  742     0(0.00%)    17(54.84%)  ||
|| Sep       .015       .009        .009      .036  720     0(0.00%)     0(0.00%)   ||
|| Oct       .016       .008        .011      .052  744     0(0.00%)     4(12.90%)  ||
|| Nov       .011       .004        .009      .035  720     0(0.00%)     1(3.33%)   ||
|| Dec       .011       .006        .009      .034  741     0(0.00%)     1(3.23%)   ||
||-----------------------------------BY YEAR----------------------------------||
|| YEAR     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992    .000   .000   .001   .002   .009   .019   .029   .040   .046   .056   .082 ||
||                                                                            ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances   ||
||          Mean       Mean      Std Dev                   1 hour      24 hour     ||
|| 1992      .020       .012        .014      .082 8431     0(0.00%)   116(33.33%)  ||
||----------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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```
                         Wind Summary for 1992
                    Edmonton East Monitoring Station
  ** calculation is for exceedances of the 24-hour regulation for O3  **
||--------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                    ||
||                        Wind Speed (km/h)                           ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N       13    36    46    35    16     2     0     0     0   148  ||
||    NNE     15    39    24    24     7     0     0     0     0   109  ||
||    NE      18    26    39    24     2     0     0     0     0   109  ||
||    ENE      4    17    14     5     1     0     0     0     0    41  ||
||    E       11    29    25    19     1     1     0     0     0    86  ||
||    ESE     10    32    64    29     4     0     0     0     0   139  ||
||    SE       5    48    96    66    24    13     2     0     0   254  ||
||    SSE     21    45   107   142   101    51    11     2     0   480  ||
||    S       25    64    75    72    43    41     8     0     0   328  ||
||    SSW     18    89    89    22     6     5     2     0     0   231  ||
||    SW      28    52    27     4     0     2     0     0     0   113  ||
||    WSW     18    14    17     8     4     0     0     0     0    61  ||
||    W       14    22    28    11     6     3     0     0     0    84  ||
||    WNW     31    38    60    53    29    34    10     3     1   259  ||
||    NW      22    36    35    38    33    18     6     0     0   188  ||
||    NNW     13    43    30    27    20    13     6     0     0   152  ||
||  TOTAL    266   630   776   579   297   183    45     5     1  2782  ||
||                                                                    ||
||  CALM =     2 hours                                                ||
||  MISSING DATA =     0 hours                                        ||
||--------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)   ||
||                                                                    ||
||                        Wind Speed (km/h)                           ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N       .5   1.3   1.7   1.3    .6    .1    .0    .0    .0   5.3  ||
||    NNE     .5   1.4    .9    .9    .3    .0    .0    .0    .0   3.9  ||
||    NE      .6    .9   1.4    .9    .1    .0    .0    .0    .0   3.9  ||
||    ENE     .1    .6    .5    .2    .0    .0    .0    .0    .0   1.5  ||
||    E       .4   1.0    .9    .7    .0    .0    .0    .0    .0   3.1  ||
||    ESE     .4   1.1   2.3   1.0    .1    .0    .0    .0    .0   5.0  ||
||    SE      .2   1.7   3.4   2.4    .9    .5    .1    .0    .0   9.1  ||
||    SSE     .8   1.6   3.8   5.1   3.6   1.8    .4    .1    .0  17.2  ||
||    S       .9   2.3   2.7   2.6   1.5   1.5    .3    .0    .0  11.8  ||
||    SSW     .6   3.2   3.2    .8    .2    .2    .1    .0    .0   8.3  ||
||    SW     1.0   1.9   1.0    .1    .0    .1    .0    .0    .0   4.1  ||
||    WSW     .6    .5    .6    .3    .1    .0    .0    .0    .0   2.2  ||
||    W       .5    .8   1.0    .4    .2    .1    .0    .0    .0   3.0  ||
||    WNW    1.1   1.4   2.2   1.9   1.0   1.2    .4    .1    .0   9.3  ||
||    NW      .8   1.3   1.3   1.4   1.2    .6    .2    .0    .0   6.8  ||
||    NNW     .5   1.5   1.1   1.0    .7    .5    .2    .0    .0   5.5  ||
||  TOTAL    9.6  22.6  27.9  20.8  10.7   6.6   1.6    .2    .0  99.9  ||
||                                                                    ||
||  CALM =    .07%                                                    ||
||  MISSING DATA =    .00%                                            ||
||--------------------------------------------------------------------||
                          O3  Summary Statistics for 1992
                          Calgary Downtown Monitoring Station
                          Units are PPM (parts per million)
||------------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .082 PPM                                            ||
|| Ambient 24-hour average regulation =   .025 PPM                                           ||
||------------------------------------BY SEASON-------------------------------------------- ||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%    MAX ||
|| Winter   .000   .000   .000   .000   .001   .004   .011   .018   .022   .029   .035 ||
|| Spring   .000   .000   .001   .002   .009   .019   .027   .035   .039   .046   .054 ||
|| Summer   .000   .000   .001   .003   .008   .016   .025   .033   .038   .050   .068 ||
|| Autumn   .000   .000   .000   .000   .002   .008   .016   .023   .027   .032   .042 ||
||                                                                                          ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean       Mean     Std Dev                    1 hour      24 hour          ||
|| Winter     .007       .001         .007     .035 2175     0(0.00%)     0(0.00%)          ||
|| Spring     .019       .010         .012     .054 2195     0(0.00%)    18(19.57%)         ||
|| Summer     .017       .010         .012     .068 2169     0(0.00%)     9(10.11%)         ||
|| Autumn     .010       .002         .009     .042 2178     0(0.00%)     0(0.00%)          ||
||------------------------------------BY MONTH--------------------------------------------- ||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%    MAX ||
|| Jan      .000   .000   .000   .000   .002   .004   .012   .020   .023   .031   .035 ||
|| Feb      .000   .000   .000   .000   .000   .004   .011   .017   .022   .029   .035 ||
|| Mar      .000   .000   .000   .001   .004   .011   .022   .029   .032   .038   .041 ||
|| Apr      .000   .000   .002   .004   .013   .021   .030   .036   .039   .044   .048 ||
|| May      .000   .001   .003   .007   .014   .022   .031   .039   .043   .048   .054 ||
|| Jun      .000   .001   .003   .005   .011   .019   .028   .036   .042   .050   .052 ||
|| Jul      .000   .000   .001   .002   .006   .014   .023   .028   .032   .043   .050 ||
|| Aug      .000   .000   .001   .002   .008   .016   .025   .033   .039   .055   .068 ||
|| Sep      .000   .000   .001   .002   .005   .012   .020   .026   .029   .033   .042 ||
|| Oct      .000   .000   .000   .000   .002   .008   .015   .023   .026   .032   .036 ||
|| Nov      .000   .000   .000   .000   .000   .004   .011   .017   .022   .029   .032 ||
|| Dec      .000   .000   .000   .000   .000   .004   .011   .017   .022   .027   .033 ||
||                                                                                          ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean       Mean     Std Dev                    1 hour      24 hour          ||
|| Jan        .008       .002         .008     .035  742     0(0.00%)     0(0.00%)          ||
|| Feb        .007       .001         .007     .035  694     0(0.00%)     0(0.00%)          ||
|| Mar        .013       .004         .011     .041  737     0(0.00%)     1(3.23%)          ||
|| Apr        .021       .013         .011     .048  717     0(0.00%)     6(20.00%)         ||
|| May        .022       .016         .012     .054  741     0(0.00%)    11(35.48%)         ||
|| Jun        .020       .015         .012     .052  716     0(0.00%)     6(20.00%)         ||
|| Jul        .015       .008         .010     .050  741     0(0.00%)     0(0.00%)          ||
|| Aug        .017       .009         .012     .068  712     0(0.00%)     3(10.71%)         ||
|| Sep        .013       .007         .009     .042  718     0(0.00%)     0(0.00%)          ||
|| Oct        .010       .002         .009     .036  742     0(0.00%)     0(0.00%)          ||
|| Nov        .007       .001         .007     .032  718     0(0.00%)     0(0.00%)          ||
|| Dec        .006       .001         .007     .033  739     0(0.00%)     0(0.00%)          ||
||-------------------------------------BY YEAR--------------------------------------------- ||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%    MAX ||
|| 1992     .000   .000   .000   .000   .003   .011   .021   .029   .034   .044   .068 ||
||                                                                                          ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances         ||
||           Mean       Mean     Std Dev                    1 hour      24 hour          ||
|| 1992       .013       .004         .011     .068 8717     0(0.00%)    27(7.44%)          ||
||------------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                                     O3  Summary Statistics for 1992
                                     Calgary Residential Monitoring Station
                                     Units are PPM (parts per million)
||------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .082 PPM                                      ||
|| Ambient 24-hour average regulation =   .025 PPM                                     ||
||------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .000    .000    .003    .012    .022    .033    .037    .044    .047 ||
|| Spring   .000    .000    .003    .007    .018    .029    .039    .047    .050    .057    .066 ||
|| Summer   .000    .000    .003    .007    .015    .026    .036    .045    .049    .060    .077 ||
|| Autumn   .000    .000    .000    .001    .006    .016    .026    .034    .037    .042    .048 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                   1 hour       24 hour        ||
|| Winter    .014       .003        .012     .047 2171     0(0.00%)      8(8.79%)      ||
|| Spring    .028       .018        .014     .066 2184     0(0.00%)     60(65.93%)     ||
|| Summer    .026       .017        .014     .077 2197     0(0.00%)     41(44.57%)     ||
|| Autumn    .017       .007        .012     .048 2177     0(0.00%)     11(12.09%)     ||
||------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .000    .000    .003    .013    .027    .036    .038    .043    .047 ||
|| Feb      .000    .000    .000    .000    .003    .012    .021    .034    .040    .045    .047 ||
|| Mar      .000    .000    .000    .002    .010    .021    .034    .041    .044    .049    .052 ||
|| Apr      .000    .000    .005    .011    .021    .030    .039    .046    .048    .050    .054 ||
|| May      .000    .002    .009    .015    .025    .034    .044    .051    .054    .063    .066 ||
|| Jun      .000    .004    .010    .012    .020    .029    .041    .049    .054    .061    .063 ||
|| Jul      .000    .000    .002    .004    .012    .023    .033    .040    .045    .052    .071 ||
|| Aug      .000    .000    .002    .005    .012    .024    .035    .044    .049    .063    .077 ||
|| Sep      .000    .000    .001    .003    .011    .021    .030    .036    .038    .043    .048 ||
|| Oct      .000    .000    .000    .001    .006    .015    .026    .033    .039    .045    .048 ||
|| Nov      .000    .000    .000    .000    .004    .012    .021    .029    .033    .038    .040 ||
|| Dec      .000    .000    .000    .000    .002    .011    .020    .027    .031    .038    .039 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                   1 hour       24 hour        ||
|| Jan       .016       .004        .013     .047  740     0(0.00%)      5(16.13%)     ||
|| Feb       .015       .003        .012     .047  690     0(0.00%)      2(6.90%)      ||
|| Mar       .022       .010        .014     .052  735     0(0.00%)     11(35.48%)     ||
|| Apr       .029       .020        .013     .054  717     0(0.00%)     21(70.00%)     ||
|| May       .034       .028        .013     .066  732     0(0.00%)     28(93.33%)     ||
|| Jun       .030       .026        .014     .063  716     0(0.00%)     23(76.67%)     ||
|| Jul       .023       .014        .013     .071  739     0(0.00%)      7(22.58%)     ||
|| Aug       .025       .015        .015     .077  742     0(0.00%)     11(35.48%)     ||
|| Sep       .020       .012        .012     .048  718     0(0.00%)      6(20.00%)     ||
|| Oct       .016       .006        .012     .048  741     0(0.00%)      2(6.45%)      ||
|| Nov       .013       .004        .010     .040  718     0(0.00%)      3(10.00%)     ||
|| Dec       .012       .003        .010     .039  741     0(0.00%)      1(3.23%)      ||
||------------------------------------BY YEAR-----------------------------------------||
|| YEAR      MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .000    .000    .002    .009    .021    .032    .041    .046    .054    .077 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                   1 hour       24 hour        ||
|| 1992      .021       .009        .014     .077 8729     0(0.00%)    120(32.88%)     ||
||------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                         Wind Summary for 1992
                   Calgary Residential Monitoring Station
  ** calculation is for exceedances of the 24-hour regulation for O3  **
||------------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                        ||
||                          Wind Speed (km/h)                             ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      131     1     0     1     0     0     0     0     0   133  ||
||    NNE     83     0     0     0     0     0     0     0     0    83  ||
||    NE      89     0     0     0     0     0     0     0     0    89  ||
||    ENE     92     0     0     0     0     0     0     0     0    92  ||
||    E      115     0     1     0     0     0     0     0     0   116  ||
||    ESE    221     0     0     0     0     0     0     0     0   221  ||
||    SE     228     1     1     2     0     0     0     0     0   232  ||
||    SSE     94     0     0     0     0     0     0     0     0    94  ||
||    S       77     2     3     1     0     0     0     0     0    83  ||
||    SSW     70     1     2     1     2     1     0     0     0    77  ||
||    SW     135     8     6     2     1     3     3     0     0   158  ||
||    WSW    278     9     6    15     2     0     0     0     0   310  ||
||    W      496    17    11     3     0     0     0     0     0   527  ||
||    WNW    329     8    11     1     0     0     0     0     0   349  ||
||    NW     130     2     1     1     0     0     0     0     0   134  ||
||    NNW    135     2     0     1     1     0     0     0     0   139  ||
||  TOTAL   2703    51    42    28     6     4     3     0     0  2837  ||
||                                                                        ||
||  CALM =    43 hours                                                    ||
||  MISSING DATA =     0 hours                                            ||
||------------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)     ||
||                                                                        ||
||                          Wind Speed (km/h)                             ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      4.5    .0    .0    .0    .0    .0    .0    .0    .0   4.6  ||
||    NNE    2.9    .0    .0    .0    .0    .0    .0    .0    .0   2.9  ||
||    NE     3.1    .0    .0    .0    .0    .0    .0    .0    .0   3.1  ||
||    ENE    3.2    .0    .0    .0    .0    .0    .0    .0    .0   3.2  ||
||    E      4.0    .0    .0    .0    .0    .0    .0    .0    .0   4.0  ||
||    ESE    7.7    .0    .0    .0    .0    .0    .0    .0    .0   7.7  ||
||    SE     7.9    .0    .0    .1    .0    .0    .0    .0    .0   8.1  ||
||    SSE    3.3    .0    .0    .0    .0    .0    .0    .0    .0   3.3  ||
||    S      2.7    .1    .1    .0    .0    .0    .0    .0    .0   2.9  ||
||    SSW    2.4    .0    .1    .0    .1    .0    .0    .0    .0   2.7  ||
||    SW     4.7    .3    .2    .1    .0    .1    .1    .0    .0   5.5  ||
||    WSW    9.7    .3    .2    .5    .1    .0    .0    .0    .0  10.8  ||
||    W     17.2    .6    .4    .1    .0    .0    .0    .0    .0  18.3  ||
||    WNW   11.4    .3    .4    .0    .0    .0    .0    .0    .0  12.1  ||
||    NW     4.5    .1    .0    .0    .0    .0    .0    .0    .0   4.7  ||
||    NNW    4.7    .1    .0    .0    .0    .0    .0    .0    .0   4.8  ||
||  TOTAL   93.9   1.8   1.5   1.0    .2    .1    .1    .0    .0  98.5  ||
||                                                                        ||
||  CALM =  1.49%                                                         ||
||  MISSING DATA =   .00%                                                 ||
||------------------------------------------------------------------------||
                              O3  Summary Statistics for 1992
                              Calgary Industrial Monitoring Station
                              Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .082 PPM                                    ||
|| Ambient 24-hour average regulation =   .025 PPM                                   ||
||-------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000   .000   .000   .000   .000   .003   .013   .024   .029   .037   .041 ||
|| Spring   .000   .000   .000   .000   .008   .022   .032   .039   .043   .053   .072 ||
|| Summer   .000   .000   .001   .002   .009   .018   .028   .036   .041   .048   .068 ||
|| Autumn   .000   .000   .000   .000   .001   .008   .019   .028   .033   .038   .047 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances     ||
||           Mean      Mean     Std Dev                   1 hour      24 hour       ||
|| Winter    .008      .000        .010     .041 2173     0(0.00%)     0(0.00%)     ||
|| Spring    .021      .007        .014     .072 2067     0(0.00%)    30(34.88%)    ||
|| Summer    .019      .011        .012     .068 2154     0(0.00%)    13(14.44%)    ||
|| Autumn    .011      .001        .011     .047 2174     0(0.00%)     1(1.10%)     ||
||-------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000   .000   .000   .000   .000   .003   .013   .026   .031   .037   .038 ||
|| Feb      .000   .000   .000   .000   .000   .004   .013   .021   .028   .038   .041 ||
|| Mar      .000   .000   .000   .000   .001   .012   .025   .032   .035   .043   .050 ||
|| Apr      .000   .000   .000   .002   .013   .024   .032   .038   .041   .045   .048 ||
|| May      .000   .000   .003   .006   .017   .028   .037   .046   .049   .065   .072 ||
|| Jun      .000   .001   .003   .006   .013   .023   .031   .040   .044   .056   .068 ||
|| Jul      .000   .000   .001   .002   .008   .016   .025   .032   .036   .044   .063 ||
|| Aug      .000   .000   .001   .001   .007   .017   .027   .035   .039   .046   .049 ||
|| Sep      .000   .000   .000   .000   .004   .016   .025   .032   .035   .039   .043 ||
|| Oct      .000   .000   .000   .000   .001   .008   .018   .027   .033   .040   .047 ||
|| Nov      .000   .000   .000   .000   .000   .005   .012   .022   .029   .034   .037 ||
|| Dec      .000   .000   .000   .000   .000   .003   .014   .023   .026   .033   .037 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean     Std Dev                   1 hour      24 hour        ||
|| Jan       .008      .000        .010     .038  739     0(0.00%)     0(0.00%)      ||
|| Feb       .008      .000        .009     .041  692     0(0.00%)     0(0.00%)      ||
|| Mar       .014      .002        .013     .050  734     0(0.00%)     0(0.00%)      ||
|| Apr       .022      .010        .013     .048  714     0(0.00%)    13(43.33%)     ||
|| May       .028      .018        .014     .072  619     0(0.00%)    17(68.00%)     ||
|| Jun       .023      .017        .013     .068  675     0(0.00%)     7(25.00%)     ||
|| Jul       .017      .009        .011     .063  739     0(0.00%)     1(3.23%)      ||
|| Aug       .018      .010        .012     .049  740     0(0.00%)     5(16.13%)     ||
|| Sep       .016      .004        .012     .043  716     0(0.00%)     1(3.33%)      ||
|| Oct       .011      .001        .011     .047  741     0(0.00%)     0(0.00%)      ||
|| Nov       .008      .001        .009     .037  717     0(0.00%)     0(0.00%)      ||
|| Dec       .008      .000        .009     .037  742     0(0.00%)     0(0.00%)      ||
||--------------------------------------BY YEAR--------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000   .000   .000   .000   .002   .012   .025   .033   .038   .046   .072 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean     Std Dev                   1 hour      24 hour        ||
|| 1992      .015      .003        .013     .072 8568     0(0.00%)    44(12.29%)     ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                           Wind Summary for 1992
                     Calgary Industrial Monitoring Station
  ** calculation is for exceedances of the 24-hour regulation for O3  **
||-----------------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours)        ||
||                                                                             ||
||                                    Wind Speed (km/h)                        ||
||   Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL        ||
||   N        69     0     0     0     0     0     0     0      0    69        ||
||   NNE      47     0     0     0     0     0     0     0      0    47        ||
||   NE       34     0     0     0     0     0     0     0      0    34        ||
||   ENE      24     0     0     0     0     0     0     0      0    24        ||
||   E        43     0     0     0     0     0     0     0      0    43        ||
||   ESE      20     0     0     0     0     0     0     0      0    20        ||
||   SE       61     0     0     0     0     0     0     0      0    61        ||
||   SSE      47     0     0     0     0     0     0     0      0    47        ||
||   S        42     0     0     0     0     0     0     0      0    42        ||
||   SSW      28     0     0     0     0     0     0     0      0    28        ||
||   SW       29     0     0     0     0     0     0     0      0    29        ||
||   WSW      36     0     0     0     0     0     0     0      0    36        ||
||   W       109     0     0     0     0     0     0     0      0   109        ||
||   WNW     208     0     0     0     0     0     0     0      0   208        ||
||   NW       86     0     0     0     0     0     0     0      0    86        ||
||   NNW     114     0     0     0     0     0     0     0      0   114        ||
||  TOTAL    997     0     0     0     0     0     0     0      0   997        ||
||                                                                             ||
||  CALM =    48 hours                                                         ||
||  MISSING DATA =    11 hours                                                 ||
||-----------------------------------------------------------------------------||
||    Joint Wind Direction and Speed Frequency Distribution (percent)          ||
||                                                                             ||
||                                    Wind Speed (km/h)                        ||
||   Dir     0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40    >40 TOTAL        ||
||   N       6.5    .0    .0    .0    .0    .0    .0    .0     .0   6.5        ||
||   NNE     4.5    .0    .0    .0    .0    .0    .0    .0     .0   4.5        ||
||   NE      3.2    .0    .0    .0    .0    .0    .0    .0     .0   3.2        ||
||   ENE     2.3    .0    .0    .0    .0    .0    .0    .0     .0   2.3        ||
||   E       4.1    .0    .0    .0    .0    .0    .0    .0     .0   4.1        ||
||   ESE     1.9    .0    .0    .0    .0    .0    .0    .0     .0   1.9        ||
||   SE      5.8    .0    .0    .0    .0    .0    .0    .0     .0   5.8        ||
||   SSE     4.5    .0    .0    .0    .0    .0    .0    .0     .0   4.5        ||
||   S       4.0    .0    .0    .0    .0    .0    .0    .0     .0   4.0        ||
||   SSW     2.7    .0    .0    .0    .0    .0    .0    .0     .0   2.7        ||
||   SW      2.7    .0    .0    .0    .0    .0    .0    .0     .0   2.7        ||
||   WSW     3.4    .0    .0    .0    .0    .0    .0    .0     .0   3.4        ||
||   W      10.3    .0    .0    .0    .0    .0    .0    .0     .0  10.3        ||
||   WNW    19.7    .0    .0    .0    .0    .0    .0    .0     .0  19.7        ||
||   NW      8.1    .0    .0    .0    .0    .0    .0    .0     .0   8.1        ||
||   NNW    10.8    .0    .0    .     .0    .0    .0    .0     .0  10.8        ||
||  TOTAL   94.4    .0    .0    .     .0    .0    .0    .0     .0  94.4        ||
||                                                                             ||
||  CALM =  4.55%                                                              ||
||  MISSING DATA =  1.04%                                                      ||
||-----------------------------------------------------------------------------||
                        O3  Summary Statistics for 1992
                        Fort Saskatchewan Monitoring Station
                        Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .082 PPM                                   ||
|| Ambient 24-hour average regulation =   .025 PPM                                  ||
||------------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .005   .017   .028   .034   .037   .043   .050 ||
|| Spring   .000   .000   .001   .006   .017   .026   .034   .040   .043   .050   .056 ||
|| Summer   .000   .001   .004   .008   .015   .023   .032   .039   .043   .052   .072 ||
|| Autumn   .000   .000   .000   .000   .005   .013   .021   .027   .030   .034   .055 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean     Std Dev                    1 hour      24 hour       ||
|| Winter    .017      .004         .013     .050 1431     0(0.00%)    16(27.12%)    ||
|| Spring    .025      .015         .012     .056 2201     0(0.00%)    44(47.83%)    ||
|| Summer    .023      .017         .012     .072 2105     0(0.00%)    28(32.94%)    ||
|| Autumn    .014      .004         .010     .055 2184     0(0.00%)     1(1.10%)     ||
||------------------------------------BY MONTH---------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .002   .012   .023   .028   .032   .039   .041 ||
|| Feb      .000   .000   .000   .001   .010   .023   .032   .037   .039   .045   .050 ||
|| Mar      .000   .000   .000   .001   .011   .022   .031   .038   .040   .046   .055 ||
|| Apr      .000   .001   .006   .011   .019   .026   .033   .037   .040   .043   .047 ||
|| May      .000   .000   .006   .011   .022   .031   .037   .044   .047   .053   .056 ||
|| Jun      .000   .004   .008   .011   .017   .027   .035   .041   .045   .058   .072 ||
|| Jul      .000   .000   .003   .006   .013   .021   .031   .037   .039   .046   .049 ||
|| Aug      .000   .000   .003   .006   .013   .021   .030   .039   .046   .052   .055 ||
|| Sep      .000   .000   .000   .001   .007   .015   .022   .026   .028   .032   .038 ||
|| Oct      .000   .000   .000   .000   .006   .016   .024   .030   .032   .044   .055 ||
|| Nov      .000   .000   .000   .000   .002   .010   .016   .024   .028   .032   .033 ||
|| Dec        *      *      *      *      *      *      *      *      *      *      *  ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean     Std Dev                    1 hour      24 hour       ||
|| Jan       .013      .002         .011     .041  735     0(0.00%)     3(10.00%)    ||
|| Feb       .021      .008         .013     .050  696     0(0.00%)    13(44.83%)    ||
|| Mar       .021      .008         .013     .055  739     0(0.00%)     9(29.03%)    ||
|| Apr       .025      .020         .010     .047  718     0(0.00%)    12(40.00%)    ||
|| May       .029      .022         .012     .056  744     0(0.00%)    23(74.19%)    ||
|| Jun       .027      .023         .012     .072  720     0(0.00%)    17(56.67%)    ||
|| Jul       .022      .015         .011     .049  736     0(0.00%)     4(13.33%)    ||
|| Aug       .022      .015         .012     .055  649     0(0.00%)     7(28.00%)    ||
|| Sep       .015      .006         .009     .038  720     0(0.00%)     0(0.00%)     ||
|| Oct       .015      .005         .011     .055  744     0(0.00%)     1(3.23%)     ||
|| Nov       .011      .002         .009     .033  720     0(0.00%)     0(0.00%)     ||
|| Dec         *         *            *        *    *                 *              ||
||-------------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .002   .010   .020   .030   .036   .040   .048   .072 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean      Mean     Std Dev                    1 hour      24 hour       ||
|| 1992      .020      .009         .013     .072 7921     0(0.00%)    89(27.22%)    ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                          Wind Summary for 1992
                   Fort Saskatchewan Monitoring Station
  ** calculation is for exceedances of the 24-hour regulation for O3  **
||--------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                    ||
||                           Wind Speed (km/h)                        ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N       32    39    39    19     3     0     0     0     0   132  ||
||    NNE     31    42    25     2     0     0     0     0     0   100  ||
||    NE      32    19     3     0     0     0     0     0     0    54  ||
||    ENE     19    19    11     0     0     0     0     0     0    49  ||
||    E       25    60    38     2     0     0     0     0     0   125  ||
||    ESE     36    78    28     3     1     0     0     0     0   146  ||
||    SE      29    57    56    38    18     9     2     0     0   209  ||
||    SSE     26    43    64    40    26    10     0     0     0   209  ||
||    S       26    58    28    24     6     4     0     0     0   146  ||
||    SSW     33    40    17     3    10     2     1     0     0   106  ||
||    SW      44    49    19     7     0     0     0     0     0   119  ||
||    WSW     40    45    15     9     0     0     0     0     0   109  ||
||    W       20    33    39    10     7     1     0     0     0   110  ||
||    WNW     15    23    54    40    10    11     4     0     0   157  ||
||    NW      28    39    47    46    36    24    10     3     3   236  ||
||    NNW     21    16    16    30    25    11     1     0     0   120  ||
||  TOTAL    457   660   499   273   142    72    18     3     3  2127  ||
||                                                                    ||
||  CALM =      9 hours                                               ||
||  MISSING DATA =      0 hours                                       ||
||--------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                    ||
||                           Wind Speed (km/h)                        ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      1.5   1.8   1.8    .9    .1    .0    .0    .0    .0   6.2  ||
||    NNE    1.5   2.0   1.2    .1    .0    .0    .0    .0    .0   4.7  ||
||    NE     1.5    .9    .1    .0    .0    .0    .0    .0    .0   2.5  ||
||    ENE     .9    .9    .5    .0    .0    .0    .0    .0    .0   2.3  ||
||    E      1.2   2.8   1.8    .1    .0    .0    .0    .0    .0   5.9  ||
||    ESE    1.7   3.7   1.3    .1    .0    .0    .0    .0    .0   6.8  ||
||    SE     1.4   2.7   2.6   1.8    .8    .4    .1    .0    .0   9.8  ||
||    SSE    1.2   2.0   3.0   1.9   1.2    .5    .0    .0    .0   9.8  ||
||    S      1.2   2.7   1.3   1.1    .3    .2    .0    .0    .0   6.8  ||
||    SSW    1.5   1.9    .8    .1    .5    .1    .0    .0    .0   5.0  ||
||    SW     2.1   2.3    .9    .3    .0    .0    .0    .0    .0   5.6  ||
||    WSW    1.9   2.1    .7    .4    .0    .0    .0    .0    .0   5.1  ||
||    W       .9   1.5   1.8    .5    .3    .0    .0    .0    .0   5.1  ||
||    WNW     .7   1.1   2.5   1.9    .5    .5    .2    .0    .0   7.4  ||
||    NW     1.3   1.8   2.2   2.2   1.7   1.1    .5    .1    .1  11.0  ||
||    NNW    1.0    .7    .7   1.4   1.2    .5    .0    .0    .0   5.6  ||
||  TOTAL   21.4  30.9  23.4  12.8   6.6   3.4    .8    .1    .1  99.6  ||
||                                                                    ||
||  CALM =    .42%                                                    ||
||  MISSING DATA =    .00%                                            ||
||--------------------------------------------------------------------||
                          O3  Summary Statistics for 1992
                          Fort McMurray Monitoring Station
                          Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .082 PPM                                      ||
|| Ambient 24-hour average regulation =   .025 PPM                                     ||
||------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000   .000   .001   .002   .006   .016   .026   .033   .035   .041   .051 ||
|| Spring   .000   .002   .007   .012   .022   .032   .039   .046   .049   .053   .059 ||
|| Summer   .000   .002   .004   .005   .011   .017   .028   .035   .040   .048   .051 ||
|| Autumn   .000   .001   .001   .002   .006   .015   .025   .030   .033   .036   .038 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour     24 hour          ||
|| Winter    .017       .008        .012     .051 2179     0(0.00%)    16(17.58%)      ||
|| Spring    .030       .025        .013     .059 1923     0(0.00%)    63(79.75%)      ||
|| Summer    .020       .016        .011     .051  911     0(0.00%)     4(10.53%)      ||
|| Autumn    .016       .010        .011     .038 1303     0(0.00%)     3(5.77%)       ||
||------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000   .000   .000   .000   .005   .015   .025   .031   .035   .040   .044 ||
|| Feb      .000   .001   .001   .002   .010   .020   .030   .035   .038   .049   .051 ||
|| Mar      .001   .002   .005   .009   .021   .034   .040   .045   .048   .051   .052 ||
|| Apr      .000   .001   .010   .014   .022   .031   .038   .044   .048   .051   .054 ||
|| May      .000   .002   .007   .011   .021   .031   .040   .047   .051   .056   .059 ||
|| Jun      .000   .001   .004   .006   .011   .017   .030   .037   .041   .049   .051 ||
|| Jul      .002   .002   .003   .004   .009   .019   .027   .030   .033   .038   .038 ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *  ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *  ||
|| Oct      .000   .001   .001   .002   .006   .016   .026   .030   .032   .035   .036 ||
|| Nov      .000   .001   .001   .002   .005   .014   .023   .030   .035   .037   .038 ||
|| Dec      .000   .001   .001   .002   .005   .012   .022   .029   .032   .037   .040 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour     24 hour          ||
|| Jan       .016       .005        .011     .044  740     0(0.00%)     3(9.68%)       ||
|| Feb       .020       .013        .012     .051  695     0(0.00%)    10(34.48%)      ||
|| Mar       .030       .025        .013     .051  459     0(0.00%)    13(72.22%)      ||
|| Apr       .030       .025        .011     .054  720     0(0.00%)    24(80.00%)      ||
|| May       .030       .024        .013     .059  744     0(0.00%)    26(83.87%)      ||
|| Jun       .020       .016        .012     .051  719     0(0.00%)     4(13.33%)      ||
|| Jul       .018       .015        .010     .036  192     0(0.00%)     0(0.00%)       ||
|| Aug         *          *           *        *     *                *                ||
|| Sep         *          *           *        *     *                *                ||
|| Oct       .016       .010        .011     .036  584     0(0.00%)     0(0.00%)       ||
|| Nov       .015       .009        .011     .038  719     0(0.00%)     3(10.00%)      ||
|| Dec       .014       .009        .010     .040  744     0(0.00%)     3(9.68%)       ||
||-------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000   .000   .001   .003   .010   .020   .031   .039   .044   .051   .059 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour     24 hour          ||
|| 1992      .021       .013        .013     .059 6316     0(0.00%)    86(33.08%)      ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                          Wind Summary for 1992
                   Fort McMurray Monitoring Station (FMMU)
  ** calculation is for exceedances of the 24-hour regulation for O3  **
||--------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                    ||
||                           Wind Speed (km/h)                        ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N       23    26    21     5     2     5     0     0     0    82  ||
||    NNE     43    84    86    32     7     3     0     0     0   255  ||
||    NE       8     8     3     2     0     0     0     0     0    21  ||
||    ENE      2     3     1     0     0     0     0     0     0     6  ||
||    E        9    11     0     0     0     0     0     0     0    20  ||
||    ESE     11     1     0     0     0     0     0     0     0    12  ||
||    SE      16    25     1     0     0     0     0     0     0    42  ||
||    SSE     27    14    16     0     0     0     0     0     0    57  ||
||    S       21     9     1     0     0     0     0     0     0    31  ||
||    SSW      6     2     0     0     0     0     0     0     0     8  ||
||    SW       8     4     0     0     0     0     0     0     0    12  ||
||    WSW     23     7     5     0     0     0     0     0     0    35  ||
||    W       32    25    24     7     0     0     0     0     0    88  ||
||    WNW     25    17    19     6     0     0     0     0     0    67  ||
||    NW      12     9     2    14     9     2     1     1     0    50  ||
||    NNW     12     4     6     6     8     3     1     2     0    42  ||
||  TOTAL    278   249   185    72    26    13     2     3     0   828  ||
||                                                                    ||
||  CALM =   159 hours                                                ||
||  MISSING DATA =  1077 hours                                        ||
||--------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                    ||
||                           Wind Speed (km/h)                        ||
||    Dir    0-5  5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N      1.1   1.3   1.0    .2    .1    .2    .0    .0    .0   4.0  ||
||    NNE    2.1   4.1   4.2   1.6    .3    .1    .0    .0    .0  12.4  ||
||    NE      .4    .4    .1    .1    .0    .0    .0    .0    .0   1.0  ||
||    ENE     .1    .1    .0    .0    .0    .0    .0    .0    .0    .3  ||
||    E       .4    .5    .0    .0    .0    .0    .0    .0    .0   1.0  ||
||    ESE     .5    .0    .0    .0    .0    .0    .0    .0    .0    .6  ||
||    SE      .8   1.2    .0    .0    .0    .0    .0    .0    .0   2.0  ||
||    SSE    1.3    .7    .8    .0    .0    .0    .0    .0    .0   2.8  ||
||    S      1.0    .4    .0    .0    .0    .0    .0    .0    .0   1.5  ||
||    SSW     .3    .1    .0    .0    .0    .0    .0    .0    .0    .4  ||
||    SW      .4    .2    .0    .0    .0    .0    .0    .0    .0    .6  ||
||    WSW    1.1    .3    .2    .0    .0    .0    .0    .0    .0   1.7  ||
||    W      1.6   1.2   1.2    .3    .0    .0    .0    .0    .0   4.3  ||
||    WNW    1.2    .8    .9    .3    .0    .0    .0    .0    .0   3.2  ||
||    NW      .6    .4    .1    .7    .4    .1    .0    .0    .0   2.4  ||
||    NNW     .6    .2    .3    .3    .4    .1    .0    .1    .0   2.0  ||
||  TOTAL   13.5  12.1   9.0   3.5   1.3    .6    .1    .1    .0  40.1  ||
||                                                                    ||
||  CALM =  7.70%                                                     ||
||  MISSING DATA = 52.18%                                             ||
||--------------------------------------------------------------------||
||--------------------------------------------------------------||
||                 Annual Average Concentration                 ||
||                 Year: 1992                                   ||
||                 Pollutant: O3 [ppm]                          ||
||-------+------------------------------------------------------||
|| Year  |   EDMU  ERMU  EIMU  CDMU  CRMU  CIMU   Fort    Fort   ||
||       |                                        Sask. McMurray ||
||-------+------------------------------------------------------||
|| 1976  |  0.024 0.027 0.022 0.012 0.027 0.019    *       *     ||
|| 1977  |  0.014 0.015 0.015 0.011 0.021 0.013    *       *     ||
|| 1978  |  0.009 0.017 0.017 0.014 0.022 0.012    *       *     ||
|| 1979  |  0.012 0.019 0.023 0.013 0.024 0.018    *       *     ||
|| 1980  |  0.012 0.015 0.020 0.012 0.020 0.014    *       *     ||
|| 1981  |  0.012 0.018 0.021 0.010 0.020 0.012    b       *     ||
|| 1982  |  0.014 0.021 0.024 0.012 0.022 0.016  0.027     *     ||
|| 1983  |  0.012 0.018 0.022 0.012 0.021 0.015  0.022     *     ||
|| 1984  |  0.015 0.017 0.020 0.013 0.023 0.015  0.027 0.021     ||
|| 1985  |  0.015 0.015 0.025 0.013 0.023 0.017  0.024 0.020     ||
|| 1986  |  0.016 0.018 0.022 0.012 0.022 0.017  0.021 0.020     ||
|| 1987  |  0.021 0.019 0.022 0.014 0.023 0.017  0.024 0.022     ||
|| 1988  |  0.016 0.018 0.022 0.016 0.023 0.017  0.025 0.022     ||
|| 1989  |  0.015 0.016 0.020 0.015 0.024 0.016  0.021 0.023     ||
|| 1990  |  0.014 0.018 0.021 0.014 0.023 0.018  0.025 0.025     ||
|| 1991  |  0.017 0.020 0.020 0.015 0.025 0.018  0.027 0.022     ||
|| 1992  |  0.016 0.017 0.020 0.013 0.021 0.015  0.020 0.021     ||
||-------+------------------------------------------------------||

a  50% to 75% of data available
b  less than 50% of data available
```

```
                        SO2 Summary Statistics for 1992
                        Edmonton East Monitoring Station
                        Units are PPM (parts per million)
||-----------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .170 PPM                              ||
|| Ambient 24-hour average regulation =   .060 PPM                             ||
|| Ambient annual average regulation =   .010 PPM                              ||
||-------------------------------------BY SEASON-------------------------------||
|| SEASON   MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter  .000   .000   .001   .001   .002   .003   .004   .006   .007   .011   .053 ||
|| Spring  .000   .000   .000   .000   .000   .001   .002   .004   .005   .011   .030 ||
|| Summer  .000   .000   .000   .000   .001   .001   .002   .004   .006   .014   .044 ||
|| Autumn  .000   .000   .000   .000   .001   .002   .003   .005   .006   .013   .030 ||
||                                                                             ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean      Mean      Std Dev                   1 hour     24 hour   ||
|| Winter    .003      .002         .003     .053 2158     0(0.00%)   0(0.00%)  ||
|| Spring    .002      .000         .002     .030 2189     0(0.00%)   0(0.00%)  ||
|| Summer    .002      .001         .003     .044 1994     0(0.00%)   0(0.00%)  ||
|| Autumn    .002      .001         .003     .030 2174     0(0.00%)   0(0.00%)  ||
||-------------------------------------BY MONTH--------------------------------||
|| MONTH    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan     .000   .000   .001   .001   .001   .002   .003   .005   .005   .008   .010 ||
|| Feb     .000   .000   .001   .001   .002   .003   .005   .007   .009   .016   .053 ||
|| Mar     .000   .000   .000   .000   .001   .002   .003   .005   .006   .011   .024 ||
|| Apr     .000   .000   .000   .000   .000   .001   .001   .002   .003   .009   .023 ||
|| May     .000   .000   .000   .000   .001   .001   .002   .004   .005   .012   .030 ||
|| Jun     .000   .000   .000   .000   .001   .001   .003   .004   .007   .014   .038 ||
|| Jul     .000   .000   .000   .000   .001   .001   .002   .004   .006   .015   .044 ||
|| Aug     .000   .000   .000   .000   .001   .001   .002   .004   .005   .014   .028 ||
|| Sep     .000   .000   .000   .000   .001   .002   .003   .005   .006   .014   .030 ||
|| Oct     .000   .000   .000   .001   .001   .002   .003   .005   .008   .018   .025 ||
|| Nov     .000   .000   .000   .000   .001   .002   .003   .004   .005   .009   .027 ||
|| Dec     .000   .000   .001   .001   .002   .002   .004   .006   .008   .013   .019 ||
||                                                                             ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean      Mean      Std Dev                   1 hour     24 hour   ||
|| Jan       .003      .001         .002     .010  735     0(0.00%)   0(0.00%)  ||
|| Feb       .004      .002         .004     .053  687     0(0.00%)   0(0.00%)  ||
|| Mar       .002      .001         .002     .024  737     0(0.00%)   0(0.00%)  ||
|| Apr       .001      .000         .002     .023  712     0(0.00%)   0(0.00%)  ||
|| May       .002      .001         .002     .030  740     0(0.00%)   0(0.00%)  ||
|| Jun       .002      .001         .003     .038  681     0(0.00%)   0(0.00%)  ||
|| Jul       .002      .001         .003     .044  572     0(0.00%)   0(0.00%)  ||
|| Aug       .002      .001         .002     .028  741     0(0.00%)   0(0.00%)  ||
|| Sep       .002      .001         .003     .030  717     0(0.00%)   0(0.00%)  ||
|| Oct       .003      .001         .003     .025  744     0(0.00%)   0(0.00%)  ||
|| Nov       .002      .001         .002     .027  713     0(0.00%)   0(0.00%)  ||
|| Dec       .003      .002         .002     .019  736     0(0.00%)   0(0.00%)  ||
||-------------------------------------BY YEAR---------------------------------||
|| YEAR     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992    .000   .000   .000   .000   .001   .002   .003   .005   .006   .013   .053 ||
||                                                                             ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean      Mean      Std Dev                   1 hour     24 hour   ||
|| 1992      .002      .001         .003     .053 8515     0(0.00%)   0(0.00%)  ||
||-----------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                              SO2 Summary Statistics for 1992
                              Calgary Industrial Monitoring Station
                              Units are PPM (parts per million)
||------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .170 PPM                                     ||
|| Ambient 24-hour average regulation =   .060 PPM                                    ||
|| Ambient annual average regulation =   .010 PPM                                     ||
||-------------------------------------BY SEASON--------------------------------------||
|| SEASON   MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter  .000    .000    .001    .001    .002    .004    .006    .008    .010    .014    .019 ||
|| Spring  .000    .000    .000    .001    .001    .002    .004    .006    .008    .011    .021 ||
|| Summer  .000    .000    .000    .000    .000    .001    .002    .004    .005    .009    .016 ||
|| Autumn  .000    .000    .000    .000    .001    .003    .005    .008    .009    .013    .022 ||
||                                                                                    ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                    1 hour      24 hour       ||
|| Winter    .004       .003        .003    .019 2158     0(0.00%)     0(0.00%)       ||
|| Spring    .003       .002        .002    .021 2039     0(0.00%)     0(0.00%)       ||
|| Summer    .002       .000        .002    .016 1818     0(0.00%)     0(0.00%)       ||
|| Autumn    .003       .001        .003    .022 2064     0(0.00%)     0(0.00%)       ||
||-------------------------------------BY MONTH---------------------------------------||
|| MONTH    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan     .000    .000    .001    .001    .002    .003    .005    .007    .008    .010    .013 ||
|| Feb     .000    .000    .001    .001    .002    .003    .006    .008    .010    .014    .017 ||
|| Mar     .000    .000    .001    .001    .002    .003    .005    .007    .009    .013    .021 ||
|| Apr     .000    .000    .001    .001    .001    .002    .004    .006    .007    .010    .014 ||
|| May     .000    .000    .000    .000    .001    .001    .003    .005    .006    .009    .012 ||
|| Jun     .000    .000    .000    .000    .000    .001    .002    .003    .004    .008    .015 ||
|| Jul     .000    .000    .000    .000    .000    .001    .002    .004    .006    .010    .014 ||
|| Aug     .000    .000    .000    .000    .000    .001    .002    .004    .006    .008    .016 ||
|| Sep     .000    .000    .000    .000    .000    .002    .004    .006    .008    .017    .022 ||
|| Oct     .000    .000    .000    .000    .001    .002    .005    .007    .009    .013    .017 ||
|| Nov     .000    .000    .000    .001    .002    .004    .006    .009    .010    .013    .017 ||
|| Dec     .000    .000    .001    .002    .003    .005    .007    .010    .011    .016    .019 ||
||                                                                                    ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                    1 hour      24 hour       ||
|| Jan       .004       .003        .002    .013  732     0(0.00%)     0(0.00%)       ||
|| Feb       .004       .003        .003    .017  686     0(0.00%)     0(0.00%)       ||
|| Mar       .004       .003        .003    .021  732     0(0.00%)     0(0.00%)       ||
|| Apr       .003       .002        .002    .014  712     0(0.00%)     0(0.00%)       ||
|| May       .002       .001        .002    .012  595     0(0.00%)     0(0.00%)       ||
|| Jun       .002       .000        .002    .015  669     0(0.00%)     0(0.00%)       ||
|| Jul       .002       .000        .002    .014  676     0(0.00%)     0(0.00%)       ||
|| Aug       .002       .000        .002    .016  473     0(0.00%)     0(0.00%)       ||
|| Sep       .003       .000        .003    .022  675     0(0.00%)     0(0.00%)       ||
|| Oct       .003       .001        .003    .017  674     0(0.00%)     0(0.00%)       ||
|| Nov       .004       .002        .003    .017  715     0(0.00%)     0(0.00%)       ||
|| Dec       .005       .004        .003    .019  740     0(0.00%)     0(0.00%)       ||
||--------------------------------------BY YEAR---------------------------------------||
|| YEAR     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992    .000    .000    .000    .000    .001    .002    .004    .007    .009    .013    .022 ||
||                                                                                    ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                    1 hour      24 hour       ||
|| 1992      .003       .001        .003    .022 8079     0(0.00%)     0(0.00%)       ||
||------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                                  SO2 Summary Statistics for 1992
                                  Fort Saskatchewan Monitoring Station
                                  Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .170 PPM                                       ||
|| Ambient 24-hour average regulation =   .060 PPM                                      ||
|| Ambient annual average regulation =   .010 PPM                                       ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .001   .002   .004   .005   .007   .013   .050 ||
|| Spring   .000   .000   .000   .000   .000   .001   .002   .003   .004   .008   .024 ||
|| Summer   .000   .000   .000   .000   .000   .001   .001   .003   .004   .008   .018 ||
|| Autumn   .000   .000   .000   .000   .000   .001   .003   .006   .008   .014   .044 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour      24 hour         ||
|| Winter    .003       .001         .003    .050 1425     0(0.00%)     0(0.00%)        ||
|| Spring    .001       .000         .002    .024 2189     0(0.00%)     0(0.00%)        ||
|| Summer    .001       .000         .002    .018 2097     0(0.00%)     0(0.00%)        ||
|| Autumn    .002       .000         .003    .044 2177     0(0.00%)     0(0.00%)        ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .001   .002   .004   .005   .007   .010   .017 ||
|| Feb      .000   .000   .000   .000   .001   .002   .004   .005   .008   .017   .050 ||
|| Mar      .000   .000   .000   .000   .000   .001   .002   .003   .004   .008   .020 ||
|| Apr      .000   .000   .000   .000   .000   .001   .001   .002   .004   .013   .024 ||
|| May      .000   .000   .000   .000   .000   .001   .001   .002   .003   .006   .019 ||
|| Jun      .000   .000   .000   .000   .000   .001   .001   .002   .003   .010   .018 ||
|| Jul      .000   .000   .000   .000   .000   .001   .001   .002   .003   .006   .009 ||
|| Aug      .000   .000   .000   .000   .000   .000   .002   .004   .006   .009   .012 ||
|| Sep      .000   .000   .000   .000   .000   .001   .003   .005   .008   .017   .025 ||
|| Oct      .000   .000   .000   .000   .000   .001   .002   .004   .006   .011   .044 ||
|| Nov      .000   .000   .000   .000   .000   .002   .004   .008   .010   .013   .021 ||
|| Dec        *      *      *      *      *      *      *      *      *      *      *  ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour      24 hour         ||
|| Jan       .003       .001         .002    .017  733     0(0.00%)     0(0.00%)        ||
|| Feb       .003       .001         .003    .050  692     0(0.00%)     0(0.00%)        ||
|| Mar       .002       .000         .002    .020  738     0(0.00%)     0(0.00%)        ||
|| Apr       .001       .000         .002    .024  711     0(0.00%)     0(0.00%)        ||
|| May       .001       .000         .001    .019  740     0(0.00%)     0(0.00%)        ||
|| Jun       .001       .000         .002    .018  719     0(0.00%)     0(0.00%)        ||
|| Jul       .001       .000         .001    .009  729     0(0.00%)     0(0.00%)        ||
|| Aug       .001       .000         .002    .012  649     0(0.00%)     0(0.00%)        ||
|| Sep       .002       .000         .003    .025  715     0(0.00%)     0(0.00%)        ||
|| Oct       .002       .000         .003    .044  744     0(0.00%)     0(0.00%)        ||
|| Nov       .003       .000         .003    .021  718     0(0.00%)     0(0.00%)        ||
|| Dec         *          *            *       *     *               *                  ||
||-------------------------------------BY YEAR-----------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .000   .001   .002   .004   .006   .011   .050 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour      24 hour         ||
|| 1992      .002       .000         .003    .050 7888     0(0.00%)     0(0.00%)        ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                               SO2 Summary Statistics for 1992
                               Fort McMurray Monitoring Station
                               Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .170 PPM                                      ||
|| Ambient 24-hour average regulation =   .060 PPM                                     ||
|| Ambient annual average regulation =   .010 PPM                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter   .000   .000   .000   .000   .000   .002   .004   .009   .014   .039   .140 ||
|| Spring   .000   .000   .000   .000   .000   .000   .002   .005   .012   .032   .096 ||
|| Summer   .000   .000   .000   .000   .000   .000   .000   .004   .010   .021   .034 ||
|| Autumn   .000   .000   .000   .000   .000   .000   .001   .002   .006   .021   .066 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour      24 hour         ||
|| Winter    .004      .000        .007     .140 2117     0(0.00%)     0(0.00%)        ||
|| Spring    .002      .000        .006     .096 1996     0(0.00%)     0(0.00%)        ||
|| Summer    .001      .000        .004     .034  897     0(0.00%)     0(0.00%)        ||
|| Autumn    .001      .000        .005     .066 1300     0(0.00%)     0(0.00%)        ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan      .000   .000   .000   .000   .000   .002   .004   .010   .020   .040   .060 ||
|| Feb      .001   .001   .002   .002   .003   .004   .007   .012   .019   .043   .140 ||
|| Mar      .000   .000   .000   .000   .001   .002   .003   .014   .023   .053   .096 ||
|| Apr      .000   .000   .000   .000   .000   .000   .001   .004   .010   .025   .037 ||
|| May      .000   .000   .000   .000   .000   .000   .000   .002   .006   .013   .021 ||
|| Jun      .000   .000   .000   .000   .000   .000   .001   .004   .010   .021   .034 ||
|| Jul      .000   .000   .000   .000   .000   .000   .000   .001   .010   .023   .024 ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *  ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *  ||
|| Oct      .000   .000   .000   .000   .000   .000   .001   .002   .006   .029   .061 ||
|| Nov      .000   .000   .000   .000   .000   .000   .001   .003   .007   .020   .066 ||
|| Dec      .000   .000   .000   .000   .000   .001   .001   .002   .005   .023   .060 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour      24 hour         ||
|| Jan       .004      .000        .007     .060  681     0(0.00%)     0(0.00%)        ||
|| Feb       .006      .005        .009     .139  695     0(0.00%)     0(0.00%)        ||
|| Mar       .005      .001        .010     .096  536     0(0.00%)     0(0.00%)        ||
|| Apr       .002      .000        .004     .037  716     0(0.00%)     0(0.00%)        ||
|| May       .001      .000        .002     .021  744     0(0.00%)     0(0.00%)        ||
|| Jun       .001      .000        .004     .034  717     0(0.00%)     0(0.00%)        ||
|| Jul       .001      .000        .004     .024  180     0(0.00%)     0(0.00%)        ||
|| Aug        *         *           *        *     *               *                   ||
|| Sep        *         *           *        *     *               *                   ||
|| Oct       .001      .000        .005     .061  583     0(0.00%)     0(0.00%)        ||
|| Nov       .001      .000        .004     .066  717     0(0.00%)     0(0.00%)        ||
|| Dec       .001      .000        .004     .060  741     0(0.00%)     0(0.00%)        ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992     .000   .000   .000   .000   .000   .000   .002   .006   .011   .032   .140 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                    1 hour      24 hour         ||
|| 1992      .003      .000        .006     .140 6310     0(0.00%)     0(0.00%)        ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                                  SO2 Summary Statistics for 1992
                                  Fort MacKay Monitoring Station
                                  Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| Ambient 1-hour average regulation =   .170 PPM                                      ||
|| Ambient 24-hour average regulation =   .060 PPM                                     ||
|| Ambient annual average regulation =   .010 PPM                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON    MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter   .000    .000    .000    .000    .001    .002    .003    .007    .012    .035    .090 ||
|| Spring   .000    .000    .000    .000    .000    .001    .002    .007    .020    .051    .258 ||
|| Summer   .000    .000    .000    .000    .000    .000    .001    .005    .012    .040    .166 ||
|| Autumn   .000    .000    .000    .000    .000    .001    .002    .005    .010    .036    .096 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour       24 hour         ||
|| Winter    .003       .001        .007     .090 2174     0(0.00%)     0(0.00%)        ||
|| Spring    .004       .000        .012     .258 2171     1(0.05%)     0(0.00%)        ||
|| Summer    .002       .000        .009     .166 1944     0(0.00%)     0(0.00%)        ||
|| Autumn    .003       .000        .007     .096 2177     0(0.00%)     0(0.00%)        ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH     MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan      .000    .000    .000    .000    .001    .001    .003    .005    .008    .021    .063 ||
|| Feb      .000    .000    .000    .000    .001    .002    .005    .014    .025    .054    .090 ||
|| Mar      .000    .000    .000    .000    .001    .001    .002    .008    .020    .077    .258 ||
|| Apr      .000    .000    .000    .000    .000    .001    .002    .015    .028    .058    .143 ||
|| May      .000    .000    .000    .000    .000    .001    .001    .004    .010    .027    .081 ||
|| Jun      .000    .000    .000    .000    .000    .000    .001    .002    .007    .017    .025 ||
|| Jul      .000    .000    .000    .000    .000    .000    .001    .007    .019    .043    .123 ||
|| Aug      .000    .000    .000    .000    .000    .000    .001    .004    .014    .055    .166 ||
|| Sep      .000    .000    .000    .000    .000    .001    .002    .004    .009    .040    .096 ||
|| Oct      .000    .000    .000    .000    .000    .001    .002    .006    .015    .038    .073 ||
|| Nov      .000    .000    .000    .001    .001    .001    .003    .005    .008    .032    .069 ||
|| Dec      .000    .000    .000    .000    .001    .002    .003    .006    .008    .018    .032 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour       24 hour         ||
|| Jan       .002       .001        .004     .063  741     0(0.00%)     0(0.00%)        ||
|| Feb       .005       .001        .010     .090  693     0(0.00%)     0(0.00%)        ||
|| Mar       .005       .001        .016     .258  733     1(0.14%)     0(0.00%)        ||
|| Apr       .005       .000        .012     .143  718     0(0.00%)     0(0.00%)        ||
|| May       .002       .000        .005     .081  720     0(0.00%)     0(0.00%)        ||
|| Jun       .001       .000        .003     .025  469     0(0.00%)     0(0.00%)        ||
|| Jul       .003       .000        .010     .123  733     0(0.00%)     0(0.00%)        ||
|| Aug       .003       .000        .012     .166  742     0(0.00%)     0(0.00%)        ||
|| Sep       .002       .000        .007     .096  718     0(0.00%)     0(0.00%)        ||
|| Oct       .003       .000        .007     .073  742     0(0.00%)     0(0.00%)        ||
|| Nov       .003       .001        .005     .069  717     0(0.00%)     0(0.00%)        ||
|| Dec       .003       .001        .003     .032  740     0(0.00%)     0(0.00%)        ||
||-------------------------------------BY YEAR-----------------------------------------||
|| YEAR      MIN     1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992     .000    .000    .000    .000    .000    .001    .002    .006    .014    .043    .258 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean       Mean     Std Dev                   1 hour       24 hour         ||
|| 1992      .003       .000        .009     .258 8466     1(0.01%)     0(0.00%)        ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

```
                        Wind Summary for 1992
                   Fort MacKay Monitoring Station
  ** calculation is for exceedances of the 1-hour regulation for SO2 **
||-----------------------------------------------------------------------||
|| Joint Wind Direction and Speed Frequency Distribution (no. of hours) ||
||                                                                       ||
||                        Wind Speed (km/h)                              ||
||    Dir    0-5   5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N        0     0     0     0     0     0     0     0     0     0  ||
||    NNE      0     0     0     0     0     0     0     0     0     0  ||
||    NE       0     0     0     0     0     0     0     0     0     0  ||
||    ENE      0     0     0     0     0     0     0     0     0     0  ||
||    E        0     0     0     0     0     0     0     0     0     0  ||
||    ESE      0     0     0     0     0     0     0     0     0     0  ||
||    SE       0     0     0     0     0     0     0     0     0     0  ||
||    SSE      0     0     0     0     0     0     0     0     0     0  ||
||    S        1     0     0     0     0     0     0     0     0     1  ||
||    SSW      0     0     0     0     0     0     0     0     0     0  ||
||    SW       0     0     0     0     0     0     0     0     0     0  ||
||    WSW      0     0     0     0     0     0     0     0     0     0  ||
||    W        0     0     0     0     0     0     0     0     0     0  ||
||    WNW      0     0     0     0     0     0     0     0     0     0  ||
||    NW       0     0     0     0     0     0     0     0     0     0  ||
||    NNW      0     0     0     0     0     0     0     0     0     0  ||
||  TOTAL      1     0     0     0     0     0     0     0     0     1  ||
||                                                                       ||
||  CALM =      0 hours                                                  ||
||  MISSING DATA =     0 hours                                           ||
||-----------------------------------------------------------------------||
||   Joint Wind Direction and Speed Frequency Distribution (percent)    ||
||                                                                       ||
||                        Wind Speed (km/h)                              ||
||    Dir    0-5   5-10 10-15 15-20 20-25 25-30 30-35 35-40   >40 TOTAL  ||
||    N       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ENE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    E       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    ESE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SE      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SSE     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    S    100.0    .0    .0    .0    .0    .0    .0    .0    .0 100.0  ||
||    SSW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    SW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    WSW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    W       .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    WNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NW      .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||    NNW     .0    .0    .0    .0    .0    .0    .0    .0    .0    .0  ||
||  TOTAL  100.0    .0    .0    .0    .0    .0    .0    .0    .0 100.0  ||
||                                                                       ||
||  CALM =   .00%                                                        ||
||  MISSING DATA =   .00%                                                ||
||-----------------------------------------------------------------------||
```

Annual Average Concentration
Year: 1992
Pollutant: SO2 [ppm]

Year	EDMU	ERMU	EIMU	CDMU	CRMU	CIMU	Fort Sask.	Fort McMurray	Fort Mackay
1976	0.00	0.00	0.00	0.00	0.00	0.00	*	*	*
1977	0.00	0.00	0.00	0.00	0.00	0.00	*	*	*
1978	0.00	0.00	0.00	0.00	0.00	0.00	*	*	*
1979	0.00	0.00	0.00	0.00	0.00	0.00	*	0.00	*
1980	0.00	0.00	0.00	0.00	0.00	0.00	*	0.00	*
1981	b	b	0.00	*	*	0.00	b	0.00	*
1982	*	*	0.00	*	*	0.00	0.00	0.00	*
1983	*	*	0.00	*	*	0.00	0.00	0.00	b
1984	*	*	0.00	*	*	0.00	0.00	0.00	0.00
1985	*	*	0.00	*	*	0.00	0.00	0.00	0.00
1986	*	*	0.00	*	*	0.00	0.00	0.00	0.00
1987	*	*	0.002	*	*	0.004	0.002	0.003	0.004
1988	*	*	0.003	*	*	0.005	0.002	0.002	0.003
1989	*	*	0.003	*	*	0.003	0.002a	0.004	0.003
1990	*	*	0.003	*	*	0.003	0.002	0.003	0.003
1991	*	*	0.003	*	*	0.003	0.002	0.003	0.003
1992	*	*	0.002	*	*	0.003	0.002	0.003	0.003

a 50% to 75% of data available
b less than 50% of data available

```
                         THC Summary Statistics for 1992
                         Edmonton Central Monitoring Station
                         Units are PPM (parts per million)
||------------------------------------------------------------------------------------||
|| No regulations                                                                     ||
||-----------------------------------BY SEASON----------------------------------------||
|| SEASON    MIN    1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter    1.1    1.5    1.6    1.8    2.3    2.7    3.0    3.4    3.8    4.5    5.0 ||
|| Spring    2.0    2.1    2.2    2.3    2.4    2.5    2.7    3.0    3.2    3.9    5.6 ||
|| Summer    1.6    1.7    1.9    2.1    2.4    2.6    2.8    3.0    3.1    3.5    4.5 ||
|| Autumn    1.1    1.3    1.5    1.6    1.9    2.2    2.4    2.7    2.8    3.4    4.3 ||
||                                                                                    ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean      Mean     Std Dev                                               ||
|| Winter    2.69      2.61       .63       3.9  1952             n/a                 ||
|| Spring    2.58      2.56       .35       3.6  2202             n/a                 ||
|| Summer    2.60      2.58       .36       2.9  1944             n/a                 ||
|| Autumn    2.19      2.15       .42       3.2  2091             n/a                 ||
||-----------------------------------BY MONTH-----------------------------------------||
|| MONTH     MIN    1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan       1.1    1.4    1.5    1.6    1.7    2.2    2.5    2.8    3.0    3.8    4.7 ||
|| Feb       2.2    2.2    2.3    2.3    2.5    2.7    2.9    3.1    3.4    3.9    4.7 ||
|| Mar       2.1    2.2    2.4    2.5    2.6    2.7    3.0    3.3    3.6    4.3    5.6 ||
|| Apr       2.0    2.0    2.1    2.2    2.3    2.3    2.4    2.6    2.7    3.2    3.7 ||
|| May       2.1    2.2    2.2    2.3    2.4    2.5    2.7    2.8    2.9    3.2    3.7 ||
|| Jun       2.2    2.3    2.3    2.4    2.4    2.5    2.6    2.7    2.8    3.0    3.4 ||
|| Jul       2.3    2.3    2.4    2.5    2.6    2.8    3.0    3.1    3.3    4.0    4.5 ||
|| Aug       1.6    1.7    1.8    1.8    1.9    2.3    2.7    3.0    3.1    3.4    3.6 ||
|| Sep       1.1    1.2    1.4    1.4    1.6    1.8    2.0    2.3    2.5    3.2    4.1 ||
|| Oct       1.9    1.9    2.0    2.1    2.2    2.4    2.5    2.7    2.9    3.6    4.3 ||
|| Nov       1.1    1.9    2.0    2.0    2.1    2.3    2.5    2.8    3.0    3.4    3.7 ||
|| Dec       1.9    2.4    2.6    2.7    2.8    3.0    3.4    3.9    4.3    4.7    5.0 ||
||                                                                                    ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean      Mean     Std Dev                                               ||
|| Jan       2.19      2.13       .53       3.6   702             n/a                 ||
|| Feb       2.72      2.70       .35       2.5   554             n/a                 ||
|| Mar       2.83      2.80       .41       3.5   742             n/a                 ||
|| Apr       2.37      2.36       .19       1.7   718             n/a                 ||
|| May       2.55      2.54       .22       1.6   742             n/a                 ||
|| Jun       2.54      2.54       .14       1.2   717             n/a                 ||
|| Jul       2.83      2.82       .29       2.2   742             n/a                 ||
|| Aug       2.34      2.29       .44       2.0   485             n/a                 ||
|| Sep       1.83      1.80       .38       3.0   712             n/a                 ||
|| Oct       2.41      2.40       .29       2.4   735             n/a                 ||
|| Nov       2.35      2.33       .32       2.6   644             n/a                 ||
|| Dec       3.16      3.13       .51       3.1   696             n/a                 ||
||-----------------------------------BY YEAR------------------------------------------||
|| YEAR      MIN    1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992      1.1    1.4    1.7    1.9    2.3    2.5    2.8    3.0    3.3    4.1    5.6 ||
||                                                                                    ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean      Mean     Std Dev                                               ||
|| 1992      2.51      2.47       .49       4.5  8189             n/a                 ||
||------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                         THC Summary Statistics for 1992
                         Edmonton Northwest Monitoring Station
                         Units are PPM (parts per million)
||-------------------------------------------------------------------------------||
|| No regulations                                                                ||
||-----------------------------------BY SEASON-----------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%     MAX ||
|| Winter    1.2    1.4    1.5    1.6    1.9    2.1    2.5    2.9    3.2    4.0     7.3 ||
|| Spring    1.6    1.7    1.7    1.8    1.8    1.9    2.1    2.5    2.8    3.7     5.0 ||
|| Summer    1.6    1.7    1.7    1.7    1.8    1.8    2.0    2.1    2.3    2.5     4.2 ||
|| Autumn    1.1    1.5    1.5    1.6    1.7    1.8    2.0    2.4    2.7    3.7     7.0 ||
||                                                                               ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean       Mean     Std Dev                                         ||
|| Winter    2.22       2.17       .55       6.1  2184              n/a          ||
|| Spring    2.04       2.01       .39       3.4  2207              n/a          ||
|| Summer    1.90       1.89       .19       2.6  2204              n/a          ||
|| Autumn    1.94       1.90       .44       5.9  2099              n/a          ||
||-----------------------------------BY MONTH------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%     MAX ||
|| Jan       1.8    1.8    1.9    1.9    2.1    2.3    2.7    3.2    3.5    4.7     7.3 ||
|| Feb       1.7    1.8    1.9    2.0    2.1    2.3    2.6    3.0    3.2    3.8     5.0 ||
|| Mar       1.7    1.7    1.8    1.8    1.9    2.1    2.4    2.9    3.2    4.2     5.0 ||
|| Apr       1.6    1.7    1.7    1.7    1.8    1.9    2.0    2.2    2.6    3.3     4.5 ||
|| May       1.7    1.7    1.7    1.8    1.8    1.8    1.9    2.2    2.4    2.9     3.8 ||
|| Jun       1.7    1.7    1.7    1.7    1.8    1.8    1.9    2.0    2.1    2.4     4.2 ||
|| Jul       1.7    1.7    1.7    1.8    1.8    1.8    2.0    2.1    2.3    2.5     2.8 ||
|| Aug       1.6    1.7    1.7    1.7    1.8    1.8    2.0    2.2    2.4    2.6     3.1 ||
|| Sep       1.1    1.7    1.7    1.7    1.8    1.8    2.1    2.4    2.7    3.8     5.7 ||
|| Oct       1.4    1.6    1.7    1.7    1.7    1.9    2.1    2.5    2.9    4.4     5.5 ||
|| Nov       1.4    1.4    1.5    1.5    1.6    1.7    1.9    2.3    2.4    2.8     7.0 ||
|| Dec       1.2    1.4    1.5    1.5    1.6    1.7    1.9    2.2    2.4    3.1     4.3 ||
||                                                                               ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean       Mean     Std Dev                                         ||
|| Jan       2.50       2.44       .58       5.5   744              n/a          ||
|| Feb       2.38       2.34       .44       3.3   696              n/a          ||
|| Mar       2.23       2.19       .50       3.3   743              n/a          ||
|| Apr       1.97       1.95       .31       2.9   720              n/a          ||
|| May       1.91       1.89       .23       2.1   744              n/a          ||
|| Jun       1.86       1.85       .17       2.5   718              n/a          ||
|| Jul       1.91       1.90       .17       1.1   742              n/a          ||
|| Aug       1.92       1.91       .21       1.5   744              n/a          ||
|| Sep       2.00       1.97       .42       4.6   719              n/a          ||
|| Oct       2.02       1.97       .49       4.1   661              n/a          ||
|| Nov       1.81       1.78       .37       5.6   719              n/a          ||
|| Dec       1.81       1.79       .32       3.1   744              n/a          ||
||------------------------------------BY YEAR------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%     MAX ||
|| 1992      1.1    1.5    1.6    1.7    1.8    1.9    2.1    2.5    2.8    3.7     7.3 ||
||                                                                               ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances  ||
||           Mean       Mean     Std Dev                                         ||
|| 1992      2.02       1.99       .43       6.2  8694              n/a          ||
||-------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                         THC Summary Statistics for 1992
                         Edmonton East Monitoring Station
                         Units are PPM (parts per million)
||----------------------------------------------------------------------------------||
|| No regulations                                                                   ||
||-----------------------------------BY SEASON--------------------------------------||
|| SEASON    MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter    1.0    1.6    1.7    1.8    2.1    2.4    2.8    3.5    4.3    7.3   14.2 ||
|| Spring    1.6    1.9    2.0    2.0    2.1    2.3    2.6    3.1    3.8    6.1   12.6 ||
|| Summer    1.5    1.7    1.8    1.9    2.0    2.2    2.5    3.2    4.2    7.2  >49.9 ||
|| Autumn    1.4    1.6    1.7    1.7    1.8    1.9    2.1    2.4    2.8    5.1   18.6 ||
||                                                                                  ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances     ||
||           Mean      Mean     Std Dev                                             ||
|| Winter    2.62      2.49       1.07      13.2  2148             n/a              ||
|| Spring    2.52      2.45        .78      11.0  2194             n/a              ||
|| Summer    2.49      2.35       1.45      48.4  2009             n/a              ||
|| Autumn    2.08      2.01        .85      17.2  2179             n/a              ||
||-----------------------------------BY MONTH---------------------------------------||
|| MONTH     MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan       1.7    2.0    2.1    2.2    2.3    2.5    2.8    3.3    4.3    7.7   13.3 ||
|| Feb       1.0    1.7    2.2    2.3    2.4    2.7    3.1    4.2    5.2    9.6   14.2 ||
|| Mar       1.6    1.7    2.0    2.0    2.2    2.4    2.7    3.3    4.3    6.7   12.6 ||
|| Apr       1.9    1.9    2.0    2.1    2.2    2.4    2.6    3.1    3.9    5.4    9.3 ||
|| May       1.8    1.9    2.0    2.0    2.1    2.2    2.5    2.9    3.4    5.7    7.7 ||
|| Jun       1.7    1.9    1.9    2.0    2.1    2.3    2.5    3.0    4.0    7.1  >49.9 ||
|| Jul       1.5    1.5    1.8    1.8    2.0    2.1    2.4    3.0    3.7    6.3   11.4 ||
|| Aug       1.6    1.7    1.7    1.8    1.9    2.2    2.6    3.5    5.0    8.9   10.3 ||
|| Sep       1.6    1.7    1.7    1.8    1.8    1.9    2.0    2.3    2.7    7.8   18.6 ||
|| Oct       1.4    1.7    1.8    1.8    1.9    2.0    2.2    2.8    3.4    6.0   13.0 ||
|| Nov       1.6    1.6    1.6    1.7    1.7    1.9    2.0    2.2    2.3    3.6    7.5 ||
|| Dec       1.6    1.6    1.7    1.7    1.8    1.9    2.2    2.7    3.4    5.0   11.8 ||
||                                                                                  ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances     ||
||           Mean      Mean     Std Dev                                             ||
|| Jan       2.74      2.65        .97      11.6   740             n/a              ||
|| Feb       3.02      2.87       1.26      13.2   666             n/a              ||
|| Mar       2.61      2.51        .95      11.0   732             n/a              ||
|| Apr       2.55      2.49        .72       7.4   718             n/a              ||
|| May       2.40      2.35        .62       5.9   744             n/a              ||
|| Jun       2.55      2.40       2.01      48.2   679             n/a              ||
|| Jul       2.37      2.28        .86       9.9   610             n/a              ||
|| Aug       2.53      2.37       1.19       8.7   720             n/a              ||
|| Sep       2.09      2.00       1.03      17.0   717             n/a              ||
|| Oct       2.23      2.14        .95      11.6   743             n/a              ||
|| Nov       1.92      1.90        .38       5.9   719             n/a              ||
|| Dec       2.12      2.05        .74      10.2   742             n/a              ||
||-----------------------------------BY YEAR----------------------------------------||
|| YEAR      MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992      1.0    1.6    1.7    1.8    1.9    2.2    2.5    3.1    3.9    6.6  >49.9 ||
||                                                                                  ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances     ||
||           Mean      Mean     Std Dev                                             ||
|| 1992      2.42      2.31       1.08      48.9  8530             n/a              ||
||----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                              THC Summary Statistics for 1992
                              Calgary Downtown Monitoring Station
                              Units are PPM (parts per million)
||----------------------------------------------------------------------------||
|| No regulations                                                             ||
||-------------------------------------BY SEASON------------------------------||
|| SEASON    MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter    1.9    2.0    2.1    2.1    2.2    2.3    2.6    2.9    3.2    3.9    5.6 ||
|| Spring    1.7    1.8    1.9    2.0    2.0    2.1    2.2    2.4    2.5    2.9    3.5 ||
|| Summer    1.7    1.8    1.8    1.8    1.9    2.0    2.0    2.1    2.2    2.4    3.0 ||
|| Autumn    1.7    1.8    1.9    1.9    2.0    2.1    2.3    2.5    2.7    3.2    4.0 ||
||                                                                            ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean      Std Dev                                     ||
|| Winter    2.44       2.42        .38      3.7  2184            n/a         ||
|| Spring    2.16       2.15        .20      1.8  2152            n/a         ||
|| Summer    1.98       1.98        .13      1.3  2204            n/a         ||
|| Autumn    2.20       2.18        .28      2.3  2182            n/a         ||
||-------------------------------------BY MONTH-------------------------------||
|| MONTH     MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan       1.9    2.0    2.1    2.1    2.2    2.4    2.6    2.9    3.2    4.0    4.8 ||
|| Feb       1.9    2.0    2.1    2.1    2.2    2.4    2.6    3.0    3.2    3.7    4.4 ||
|| Mar       1.9    2.0    2.0    2.0    2.1    2.2    2.3    2.4    2.7    3.1    3.5 ||
|| Apr       1.7    1.7    1.9    2.0    2.0    2.1    2.2    2.4    2.5    2.8    3.3 ||
|| May       1.7    1.8    1.8    1.9    2.0    2.1    2.2    2.3    2.3    2.5    2.9 ||
|| Jun       1.8    1.8    1.9    1.9    2.0    2.0    2.1    2.2    2.2    2.4    2.9 ||
|| Jul       1.8    1.8    1.8    1.9    1.9    2.0    2.0    2.1    2.2    2.5    2.8 ||
|| Aug       1.7    1.8    1.8    1.8    1.9    1.9    2.0    2.1    2.2    2.4    3.0 ||
|| Sep       1.7    1.7    1.8    1.9    1.9    2.0    2.1    2.3    2.5    3.1    3.7 ||
|| Oct       1.9    1.9    2.0    2.0    2.1    2.2    2.3    2.5    2.7    3.1    3.6 ||
|| Nov       1.8    1.9    2.0    2.0    2.1    2.2    2.4    2.6    2.8    3.6    4.0 ||
|| Dec       1.9    1.9    2.0    2.1    2.2    2.3    2.5    2.9    3.2    4.0    5.6 ||
||                                                                            ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean      Std Dev                                     ||
|| Jan       2.45       2.42        .39      2.9   744            n/a         ||
|| Feb       2.46       2.44        .36      2.5   696            n/a         ||
|| Mar       2.23       2.22        .21      1.6   744            n/a         ||
|| Apr       2.15       2.14        .19      1.6   675            n/a         ||
|| May       2.08       2.08        .15      1.2   733            n/a         ||
|| Jun       2.03       2.03        .11      1.1   719            n/a         ||
|| Jul       1.97       1.97        .13      1.0   742            n/a         ||
|| Aug       1.95       1.95        .14      1.3   743            n/a         ||
|| Sep       2.07       2.06        .24      2.0   720            n/a         ||
|| Oct       2.23       2.22        .24      1.7   742            n/a         ||
|| Nov       2.30       2.28        .31      2.2   720            n/a         ||
|| Dec       2.41       2.39        .40      3.7   744            n/a         ||
||-------------------------------------BY YEAR--------------------------------||
|| YEAR      MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992      1.7    1.8    1.9    1.9    2.0    2.1    2.3    2.5    2.8    3.4    5.6 ||
||                                                                            ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean       Mean      Std Dev                                     ||
|| 1992      2.19       2.18        .31      3.9  8722            n/a         ||
||----------------------------------------------------------------------------||
   n/a - not applicable          * - no data
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                              THC Summary Statistics for 1992
                              Calgary Residential Monitoring Station
                              Units are PPM (parts per million)
||-----------------------------------------------------------------------------||
|| No regulations                                                              ||
||------------------------------------BY SEASON--------------------------------||
|| SEASON    MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter    1.6     1.6     1.7     1.8     1.9     2.0     2.2     2.5     2.7     3.1     4.3 ||
|| Spring    1.6     1.6     1.6     1.7     1.7     1.8     1.9     2.0     2.1     2.4     3.2 ||
|| Summer    1.6     1.7     1.8     1.8     1.8     1.9     1.9     2.1     2.1     2.4     2.7 ||
|| Autumn    1.7     1.8     1.8     1.8     1.9     1.9     2.0     2.2     2.3     2.8     4.0 ||
||                                                                             ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| Winter    2.08       2.06         .31      2.7  2157            n/a               ||
|| Spring    1.80       1.80         .17      1.9  2103            n/a               ||
|| Summer    1.90       1.90         .13      1.1  2135            n/a               ||
|| Autumn    1.98       1.97         .19      2.3  2162            n/a               ||
||------------------------------------BY MONTH---------------------------------||
|| MONTH     MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan       1.6     1.6     1.7     1.7     1.8     1.9     2.1     2.4     2.6     3.1     4.3 ||
|| Feb       1.6     1.6     1.7     1.7     1.8     2.0     2.3     2.6     2.8     3.3     3.6 ||
|| Mar       1.6     1.6     1.7     1.7     1.8     1.9     2.0     2.2     2.3     2.7     3.2 ||
|| Apr       1.6     1.6     1.6     1.6     1.7     1.7     1.8     1.9     2.0     2.1     2.3 ||
|| May       1.6     1.6     1.6     1.6     1.7     1.7     1.8     1.9     1.9     2.2     2.4 ||
|| Jun       1.6     1.7     1.8     1.8     1.8     1.8     1.9     1.9     2.0     2.1     2.1 ||
|| Jul       1.7     1.7     1.8     1.8     1.8     1.9     1.9     2.0     2.1     2.3     2.7 ||
|| Aug       1.7     1.7     1.8     1.8     1.8     1.9     2.1     2.2     2.3     2.4     2.6 ||
|| Sep       1.8     1.8     1.8     1.8     1.8     1.9     2.0     2.1     2.2     2.5     2.8 ||
|| Oct       1.7     1.7     1.8     1.8     1.9     1.9     2.0     2.1     2.3     2.8     3.1 ||
|| Nov       1.8     1.8     1.8     1.8     1.9     2.0     2.1     2.2     2.3     3.1     4.0 ||
|| Dec       1.8     1.8     1.9     1.9     2.0     2.1     2.3     2.4     2.5     2.9     3.4 ||
||                                                                             ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| Jan       2.01       1.99         .33      2.7   739            n/a               ||
|| Feb       2.10       2.07         .35      2.0   674            n/a               ||
|| Mar       1.92       1.91         .22      1.9   652            n/a               ||
|| Apr       1.76       1.75         .12       .7   720            n/a               ||
|| May       1.75       1.75         .11       .8   731            n/a               ||
|| Jun       1.85       1.85         .07       .5   718            n/a               ||
|| Jul       1.88       1.88         .11      1.0   673            n/a               ||
|| Aug       1.97       1.96         .15       .9   744            n/a               ||
|| Sep       1.96       1.95         .15      1.0   698            n/a               ||
|| Oct       1.97       1.96         .17      1.4   744            n/a               ||
|| Nov       2.02       2.01         .22      2.2   720            n/a               ||
|| Dec       2.13       2.12         .23      1.6   744            n/a               ||
||------------------------------------BY YEAR----------------------------------||
|| YEAR      MIN      1%      5%     10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992      1.6     1.6     1.7     1.7     1.8     1.9     2.0     2.2     2.4     2.8     4.3 ||
||                                                                             ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| 1992      1.94       1.93         .23      3.0  8557            n/a               ||
||-----------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                           THC Summary Statistics for 1992
                           Calgary Industrial Monitoring Station
                           Units are PPM (parts per million)
||-------------------------------------------------------------------------------------||
|| No regulations                                                                      ||
||-------------------------------------BY SEASON---------------------------------------||
|| SEASON     MIN      1%      5%      10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Winter     1.6     1.6     1.6     1.7     1.8     2.0     2.3     2.6     2.9     3.5     4.3 ||
|| Spring     1.6     1.7     1.7     1.8     1.8     1.9     2.0     2.2     2.4     2.9     3.6 ||
|| Summer     1.6     1.6     1.7     1.8     1.8     1.9     2.0     2.1     2.2     2.5     3.1 ||
|| Autumn     1.8     1.8     1.8     1.8     1.9     2.0     2.2     2.5     2.7     3.2     3.9 ||
||                                                                                     ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                                                ||
|| Winter     2.11      2.08       .40      2.7  1937             n/a                  ||
|| Spring     1.95      1.94       .22      2.0  2051             n/a                  ||
|| Summer     1.93      1.92       .18      1.5  2132             n/a                  ||
|| Autumn     2.09      2.07       .31      2.1  2161             n/a                  ||
||-------------------------------------BY MONTH----------------------------------------||
|| MONTH      MIN      1%      5%      10%     25%     50%     75%     90%     95%     99%     MAX ||
|| Jan        1.6     1.6     1.6     1.7     1.8     1.9     2.1     2.5     2.7     3.5     3.8 ||
|| Feb        1.6     1.6     1.6     1.6     1.7     1.8     2.0     2.3     2.7     3.4     3.8 ||
|| Mar        1.7     1.7     1.8     1.8     1.9     1.9     2.2     2.4     2.5     3.1     3.6 ||
|| Apr        1.6     1.6     1.7     1.8     1.8     1.9     2.0     2.1     2.3     2.8     3.6 ||
|| May        1.7     1.7     1.7     1.8     1.8     1.9     1.9     2.0     2.1     2.4     2.8 ||
|| Jun        1.6     1.6     1.7     1.7     1.8     1.8     1.9     2.0     2.1     2.2     2.4 ||
|| Jul        1.6     1.6     1.6     1.7     1.8     1.9     1.9     2.0     2.1     2.3     2.3 ||
|| Aug        1.7     1.8     1.8     1.8     1.9     2.0     2.1     2.3     2.4     2.7     3.1 ||
|| Sep        1.8     1.8     1.8     1.8     1.9     1.9     2.0     2.3     2.5     2.9     3.2 ||
|| Oct        1.8     1.8     1.8     1.8     1.9     2.0     2.2     2.5     2.8     3.4     3.7 ||
|| Nov        1.8     1.8     1.8     1.9     2.0     2.1     2.4     2.7     2.8     3.5     3.9 ||
|| Dec        1.9     1.9     1.9     2.0     2.1     2.2     2.5     2.8     3.1     3.8     4.3 ||
||                                                                                     ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                                                ||
|| Jan        2.00      1.98       .36      2.2   738             n/a                  ||
|| Feb        1.93      1.90       .35      2.2   455             n/a                  ||
|| Mar        2.03      2.02       .27      1.9   719             n/a                  ||
|| Apr        1.91      1.90       .21      2.0   710             n/a                  ||
|| May        1.89      1.89       .13      1.1   622             n/a                  ||
|| Jun        1.86      1.86       .13       .8   663             n/a                  ||
|| Jul        1.87      1.87       .13       .7   727             n/a                  ||
|| Aug        2.04      2.03       .20      1.4   742             n/a                  ||
|| Sep        2.00      1.99       .22      1.4   720             n/a                  ||
|| Oct        2.08      2.06       .32      1.9   721             n/a                  ||
|| Nov        2.21      2.18       .35      2.1   720             n/a                  ||
|| Dec        2.33      2.30       .37      2.4   744             n/a                  ||
||--------------------------------------BY YEAR----------------------------------------||
|| YEAR       MIN      1%      5%      10%     25%     50%     75%     90%     95%     99%     MAX ||
|| 1992       1.6     1.6     1.7     1.8     1.8     1.9     2.1     2.4     2.6     3.2     4.3 ||
||                                                                                     ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances        ||
||           Mean      Mean     Std Dev                                                ||
|| 1992       2.02      2.00       .30      2.7  8281             n/a                  ||
||-------------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                         THC Summary Statistics for 1992
                         Fort Saskatchewan Monitoring Station
                         Units are PPM (parts per million)
||----------------------------------------------------------------------------------||
|| No regulations                                                                   ||
||--------------------------------------BY SEASON-----------------------------------||
|| SEASON    MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter     .9    1.1    1.3    1.4    1.7    2.1    2.5    2.9    3.3    4.2    5.3 ||
|| Spring    1.2    1.5    1.6    1.6    1.7    1.8    2.1    2.8    3.3    4.0    8.0 ||
|| Summer    1.1    1.4    1.6    1.7    1.8    1.9    2.1    2.2    2.3    2.5    4.2 ||
|| Autumn    1.5    1.7    1.9    1.9    2.0    2.2    2.3    2.6    2.9    3.2    3.9 ||
||                                                                                  ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                                            ||
|| Winter    2.15       2.07        .62      4.4  1253             n/a                ||
|| Spring    2.03       1.97        .56      6.8  2138             n/a                ||
|| Summer    1.93       1.91        .23      3.1  1951             n/a                ||
|| Autumn    2.23       2.21        .30      2.4  2093             n/a                ||
||--------------------------------------BY MONTH------------------------------------||
|| MONTH     MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan        .9    1.0    1.2    1.3    1.6    1.8    2.3    3.0    3.4    4.1    4.9 ||
|| Feb       1.2    1.2    1.4    1.7    2.0    2.3    2.5    2.9    3.3    4.3    5.3 ||
|| Mar       1.2    1.5    1.6    1.6    1.7    1.8    1.9    2.4    2.9    4.9    8.0 ||
|| Apr       1.4    1.5    1.5    1.6    1.7    2.1    2.6    3.2    3.5    4.1    4.1 ||
|| May       1.4    1.4    1.6    1.7    1.8    1.8    2.0    2.1    2.3    3.4    3.7 ||
|| Jun       1.8    1.8    1.8    1.9    1.9    2.0    2.1    2.2    2.3    2.5    4.2 ||
|| Jul       1.4    1.5    1.7    1.7    1.8    1.9    2.0    2.2    2.3    2.6    3.9 ||
|| Aug       1.1    1.3    1.4    1.6    1.7    1.8    1.9    2.1    2.3    2.6    2.8 ||
|| Sep       1.8    1.9    1.9    2.0    2.1    2.2    2.4    2.6    2.8    3.2    3.9 ||
|| Oct       1.8    1.9    1.9    1.9    2.0    2.1    2.2    2.6    2.7    3.1    3.6 ||
|| Nov       1.5    1.6    1.8    1.9    2.1    2.2    2.3    2.8    3.0    3.3    3.7 ||
|| Dec        *      *      *      *      *      *      *      *      *      *      *  ||
||                                                                                  ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                                            ||
|| Jan       2.00       1.91        .66      4.0   606             n/a                ||
|| Feb       2.30       2.24        .55      4.1   647             n/a                ||
|| Mar       1.94       1.89        .61      6.8   734             n/a                ||
|| Apr       2.24       2.16        .65      2.7   690             n/a                ||
|| May       1.90       1.89        .30      2.3   714             n/a                ||
|| Jun       2.02       2.02        .17      2.4   679             n/a                ||
|| Jul       1.93       1.92        .23      2.5   732             n/a                ||
|| Aug       1.80       1.79        .24      1.7   540             n/a                ||
|| Sep       2.28       2.27        .26      2.1   635             n/a                ||
|| Oct       2.16       2.14        .27      1.8   742             n/a                ||
|| Nov       2.24       2.22        .35      2.2   716             n/a                ||
|| Dec        *          *           *        *     *               *                 ||
||--------------------------------------BY YEAR-------------------------------------||
|| YEAR      MIN     1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992       .9    1.3    1.6    1.7    1.8    2.0    2.2    2.6    2.9    3.7    8.0 ||
||                                                                                  ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances       ||
||           Mean       Mean     Std Dev                                            ||
|| 1992      2.08       2.04        .46      7.1  7435             n/a                ||
||----------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

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                    THC Summary Statistics for 1992
                    Fort McMurray Monitoring Station
                    Units are PPM (parts per million)
||-----------------------------------------------------------------------------------||
|| No regulations                                                                    ||
||-------------------------------------BY SEASON-------------------------------------||
|| SEASON    MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter    1.2    1.3    1.5    1.6    1.7    1.9    2.2    2.3    2.4    2.7    3.4 ||
|| Spring    1.1    1.2    1.4    1.4    1.5    1.7    1.8    1.9    2.0    2.2    2.6 ||
|| Summer    1.3    1.4    1.4    1.4    1.5    1.6    1.7    1.8    1.9    2.1    2.3 ||
|| Autumn    1.8    1.8    1.9    2.0    2.1    2.2    2.3    2.4    2.5    2.9    3.8 ||
||                                                                                   ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| Winter    1.96       1.94       .30       2.2  2178              n/a              ||
|| Spring    1.67       1.66       .20       1.5  1999              n/a              ||
|| Summer    1.63       1.62       .16       1.0   912              n/a              ||
|| Autumn    2.21       2.20       .20       2.0  1309              n/a              ||
||-------------------------------------BY MONTH--------------------------------------||
|| MONTH     MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan       1.2    1.3    1.3    1.5    1.7    1.8    1.9    2.1    2.2    2.6    3.1 ||
|| Feb       1.3    1.4    1.5    1.5    1.7    1.9    2.0    2.2    2.3    2.9    3.4 ||
|| Mar       1.2    1.5    1.6    1.7    1.8    1.9    1.9    2.0    2.1    2.3    2.6 ||
|| Apr       1.1    1.1    1.3    1.4    1.5    1.6    1.7    1.8    1.9    2.1    2.4 ||
|| May       1.3    1.3    1.4    1.4    1.5    1.6    1.7    1.8    1.8    2.0    2.1 ||
|| Jun       1.3    1.3    1.4    1.4    1.5    1.6    1.7    1.8    1.9    2.1    2.2 ||
|| Jul       1.4    1.4    1.4    1.5    1.5    1.6    1.7    1.8    1.8    1.9    2.3 ||
|| Aug        *      *      *      *      *      *      *      *      *      *      *  ||
|| Sep        *      *      *      *      *      *      *      *      *      *      *  ||
|| Oct       1.8    1.8    1.8    1.9    2.0    2.1    2.3    2.4    2.5    2.8    3.8 ||
|| Nov       1.9    1.9    2.0    2.1    2.1    2.3    2.3    2.5    2.6    2.9    3.1 ||
|| Dec       2.1    2.1    2.1    2.1    2.1    2.2    2.3    2.4    2.5    2.6    2.8 ||
||                                                                                   ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| Jan       1.79       1.77       .25       1.9   741              n/a              ||
|| Feb       1.86       1.84       .28       2.1   693              n/a              ||
|| Mar       1.84       1.84       .15       1.4   537              n/a              ||
|| Apr       1.63       1.61       .19       1.3   718              n/a              ||
|| May       1.58       1.57       .15        .8   744              n/a              ||
|| Jun       1.64       1.63       .17        .9   720              n/a              ||
|| Jul       1.61       1.60       .14        .9   192              n/a              ||
|| Aug        *          *          *         *     *                *               ||
|| Sep        *          *          *         *     *                *               ||
|| Oct       2.15       2.14       .21       2.0   589              n/a              ||
|| Nov       2.27       2.26       .18       1.2   720              n/a              ||
|| Dec       2.24       2.23       .13        .7   744              n/a              ||
||-------------------------------------BY YEAR---------------------------------------||
|| YEAR      MIN     1%     5%     10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992      1.1    1.3    1.4    1.5    1.6    1.8    2.1    2.3    2.4    2.6    3.8 ||
||                                                                                   ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances      ||
||           Mean       Mean     Std Dev                                             ||
|| 1992      1.87       1.85       .32       2.7  6398              n/a              ||
||-----------------------------------------------------------------------------------||
   n/a - not applicable         * - no data
```

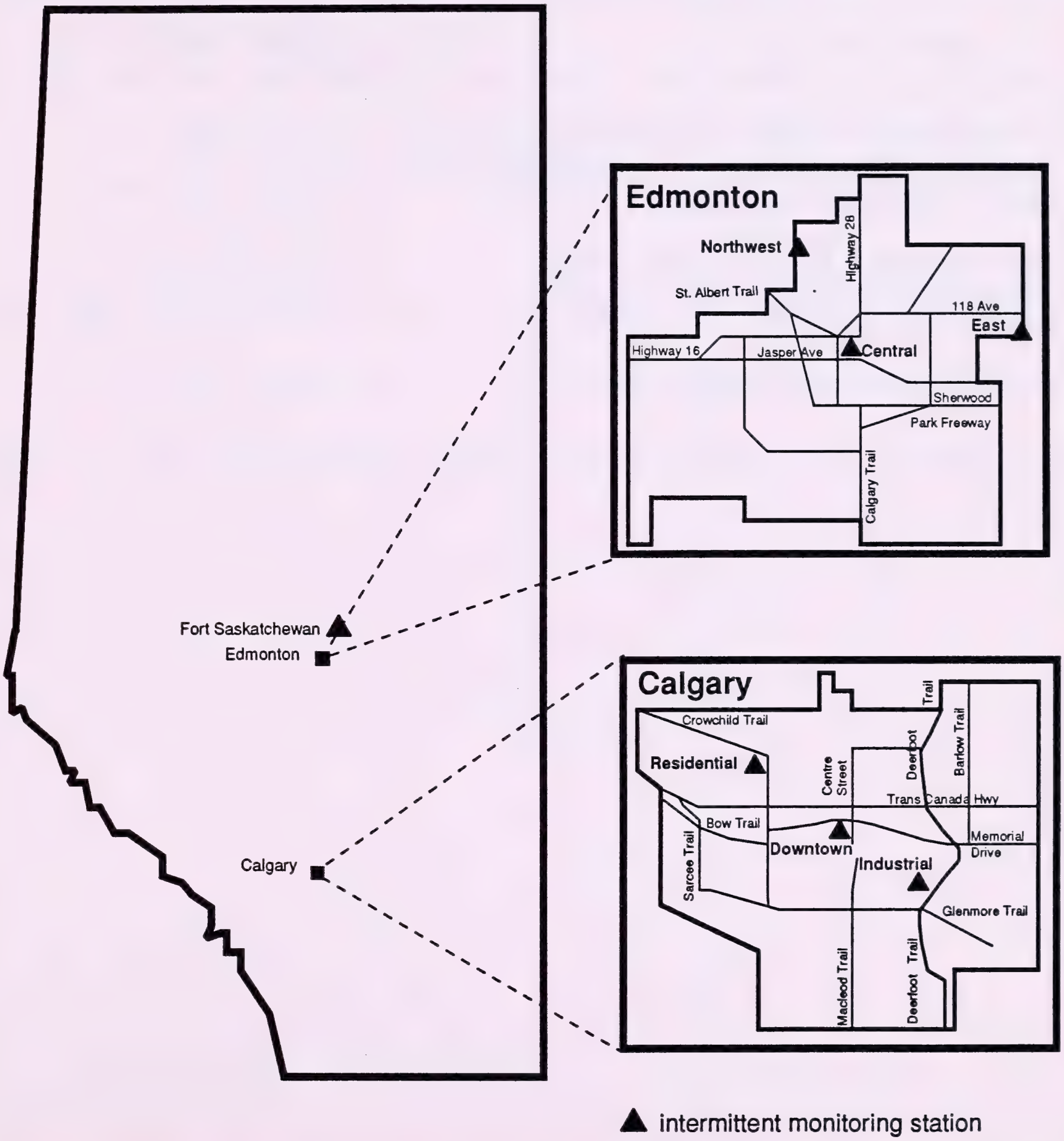
```
                         THC Summary Statistics for 1992
                         Fort MacKay Monitoring Station
                         Units are PPM (parts per million)
||------------------------------------------------------------------------------||
|| No regulations                                                               ||
||-----------------------------------BY SEASON----------------------------------||
|| SEASON    MIN    1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Winter    1.1    1.4    1.6    1.6    1.7    1.8    2.0    2.2    2.3    2.6    3.9 ||
|| Spring    1.4    1.5    1.6    1.6    1.7    1.8    1.8    2.0    2.1    2.4    3.0 ||
|| Summer    1.3    1.4    1.5    1.5    1.6    1.7    1.8    2.0    2.1    2.4    3.6 ||
|| Autumn    1.1    1.4    1.5    1.5    1.5    1.7    1.8    2.0    2.1    2.3    3.8 ||
||                                                                              ||
|| SEASON Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean      Mean     Std Dev                                          ||
|| Winter    1.86      1.84       .25       2.8  2173            n/a             ||
|| Spring    1.79      1.78       .16       1.6  2180            n/a             ||
|| Summer    1.74      1.73       .20       2.3  2200            n/a             ||
|| Autumn    1.70      1.69       .21       2.7  2152            n/a             ||
||-----------------------------------BY MONTH-----------------------------------||
|| MONTH     MIN    1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| Jan       1.1    1.1    1.5    1.6    1.6    1.8    2.0    2.2    2.3    2.5    2.6 ||
|| Feb       1.5    1.6    1.6    1.7    1.8    1.8    1.9    2.1    2.3    2.6    2.8 ||
|| Mar       1.5    1.6    1.6    1.7    1.7    1.8    1.9    2.1    2.2    2.4    3.0 ||
|| Apr       1.4    1.5    1.6    1.6    1.7    1.8    1.8    1.9    2.0    2.4    2.6 ||
|| May       1.5    1.5    1.5    1.6    1.7    1.7    1.8    1.9    1.9    2.2    2.6 ||
|| Jun       1.5    1.5    1.6    1.6    1.7    1.7    1.8    1.9    2.0    2.3    2.6 ||
|| Jul       1.3    1.4    1.6    1.6    1.7    1.7    1.9    2.1    2.2    2.5    3.6 ||
|| Aug       1.4    1.4    1.5    1.5    1.5    1.6    1.8    1.9    2.0    2.4    3.2 ||
|| Sep       1.4    1.4    1.4    1.4    1.5    1.5    1.6    1.7    1.9    2.4    3.0 ||
|| Oct       1.4    1.5    1.6    1.6    1.6    1.7    1.8    2.0    2.1    2.3    3.8 ||
|| Nov       1.1    1.5    1.6    1.7    1.7    1.8    1.9    2.0    2.1    2.2    2.4 ||
|| Dec       1.5    1.6    1.6    1.6    1.6    1.8    2.0    2.2    2.4    2.8    3.9 ||
||                                                                              ||
|| MONTH  Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean      Mean     Std Dev                                          ||
|| Jan       1.85      1.83       .26       1.5   738            n/a             ||
|| Feb       1.87      1.86       .20       1.3   693            n/a             ||
|| Mar       1.83      1.83       .18       1.5   743            n/a             ||
|| Apr       1.78      1.77       .15       1.2   717            n/a             ||
|| May       1.74      1.74       .12       1.1   720            n/a             ||
|| Jun       1.76      1.75       .15       1.1   720            n/a             ||
|| Jul       1.79      1.78       .22       2.3   736            n/a             ||
|| Aug       1.69      1.68       .20       1.8   744            n/a             ||
|| Sep       1.57      1.56       .19       1.6   720            n/a             ||
|| Oct       1.73      1.72       .19       2.4   743            n/a             ||
|| Nov       1.82      1.81       .16       1.3   689            n/a             ||
|| Dec       1.84      1.83       .27       2.4   742            n/a             ||
||-----------------------------------BY YEAR------------------------------------||
|| YEAR      MIN    1%     5%    10%    25%    50%    75%    90%    95%    99%    MAX ||
|| 1992      1.1    1.4    1.5    1.5    1.6    1.7    1.9    2.0    2.2    2.4    3.9 ||
||                                                                              ||
|| YEAR   Arithmetic Geometric Arithmetic  Range   N      Number of Exceedances ||
||           Mean      Mean     Std Dev                                          ||
|| 1992      1.77      1.76       .21       2.8  8705            n/a             ||
||------------------------------------------------------------------------------||
   n/a - not applicable          * - no data
```

Annual Average Concentration
Year: 1992
Pollutant: THC [ppm]

Year	EDMU	ERMU	EIMU	CDMU	CRMU	CIMU	Fort Sask.	Fort McMurray	Fort Mackay
1976	2.0	2.4	2.4	2.2	1.6	2.0	*	*	*
1977	2.0	2.1	2.6	2.4	2.0	2.0	*	*	*
1978	2.2	2.4	3.6	2.4	2.0	2.1	*	*	*
1979	1.8	2.6	2.5	2.9	2.1	2.0	*	*	*
1980	2.1	2.5	2.5	2.2	1.8	2.2	*	*	*
1981	2.2	2.5	2.8	2.1	1.8	2.3	b	b	*
1982	2.3	2.3	2.5	2.1	1.8	2.0	1.6	1.6a	*
1983	2.3	2.3	3.8	2.2	2.0	2.2	1.4	b	*
1984	2.4	2.2	3.7	2.2	1.9	2.2	1.5	1.9a	*
1985	2.9	2.1	2.0	2.1	1.9	2.1	1.3	1.7	*
1986	2.4	2.2	2.2	2.2	2.0	2.2	2.0	2.0	b
1987	2.5	2.1	1.8	2.3	2.0	2.0	2.1	1.9	1.9
1988	2.2	2.2	1.9	2.1	2.0	2.1	2.3	1.8	1.8
1989	2.1	2.2	1.8	2.2	2.0	2.1	1.8a	2.3	1.9
1990	2.0	2.2	1.6	2.1	2.0	2.0	2.0	1.6	1.9
1991	1.8	2.2	2.8	2.2	2.0	1.9	2.0	1.6	1.6
1992	2.5	2.0	2.4	2.2	1.9	2.0	2.1	1.9	1.8

a 50% to 75% of data available
b less than 50% of data available

LOCATION OF INTERMITTENT AIR QUALITY MONITORING STATIONS



Alberta
ENVIRONMENTAL PROTECTION
Environmental Assessment Division
Environmental Quality Monitoring Branch

Location of Intermittent Monitoring Stations

Station Name	Station Location
Edmonton Central (Downtown) Monitoring Unit (EDMU)	10255 - 104 St.
Edmonton Northwest (Residential) Monitoring Unit (ERMU)	13335 - 127 St.
Edmonton East (Industrial) Monitoring Unit (EIMU)	105 Ave. and 17 St.
Calgary Downtown Monitoring Unit (CDMU)	611 - 4 St. S.W.
Calgary Residential Monitoring Unit (CRMU)	39 St. and 29 Ave. N.W.
Calgary Industrial Monitoring Unit (CIMU)	49 Ave. and 15 St. S.E.
Fort Saskatchewan Monitoring Unit (EMMU)	100 Ave. and 98 St.

Pollutant Name : SUSPENDED PARTICULATES									Percentage of Readings > Standard
Ambient 24 Hr. Regulation = 100 µg/m3									
EDMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK	24 hr
1992	Jan	27.3	*	*	38.3	*	*	49.4	0.0
	Feb	30.7	*	*	68.5	*	*	174.4	50.0
	Mar	48.3	*	*	97.4	*	*	171.7	66.7
	Apr	43.8	*	*	64.3	*	*	102.0	20.0
	May	34.3	*	*	49.3	*	*	75.2	0.0
	Jun	54.9	*	*	64.4	*	*	83.8	0.0
	Jul	34.3	*	*	57.0	*	*	92.9	0.0
	Aug	21.9	*	*	36.8	*	*	61.0	0.0
	Sep	31.5	*	*	57.9	*	*	78.9	0.0
	Oct	68.0	*	*	85.2	*	*	120.7	40.0
	Nov	17.3	*	*	36.9	*	*	66.4	0.0
	Dec	19.8	*	*	41.6	*	*	87.2	0.0
ERMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK	24 hr
1992	Jan	15.6	*	*	24.7	*	*	33.0	0.0
	Feb	18.8	*	*	52.0	*	*	90.1	0.0
	Mar	39.8	*	*	80.7	*	*	135.1	40.0
	Apr	21.5	*	*	34.6	*	*	54.1	0.0
	May	36.7	*	*	50.0	*	*	77.0	0.0
	Jun	27.8	*	*	38.9	*	*	54.5	0.0
	Jul	22.1	*	*	35.7	*	*	44.3	0.0
	Aug	18.4	*	*	35.8	*	*	78.9	0.0
	Sep	26.3	*	*	38.5	*	*	61.8	0.0
	Oct	47.9	*	*	59.8	*	*	88.2	0.0
	Nov	4.7	*	*	26.7	*	*	53.9	0.0
	Dec	8.6	*	*	30.2	*	*	84.7	0.0
EIMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK	24 hr
1992	Jan	14.9	*	*	22.5	*	*	37.6	0.0
	Feb	17.6	*	*	45.2	*	*	88.0	0.0
	Mar	30.4	*	*	66.5	*	*	124.0	16.7
	Apr	24.7	*	*	49.8	*	*	96.2	0.0
	May	22.8	*	*	51.0	*	*	102.5	20.0
	Jun	42.3	*	*	62.4	*	*	94.6	0.0
	Jul	43.3	*	*	54.8	*	*	78.2	0.0
	Aug	44.3	*	*	58.2	*	*	78.8	0.0
	Sep	24.6	*	*	46.3	*	*	98.4	0.0
	Oct	52.1	*	*	73.5	*	*	98.5	0.0
	Nov	13.4	*	*	29.0	*	*	62.1	0.0
	Dec	18.6	*	*	38.7	*	*	113.4	20.0

Trend of the Average Annual Concentration

Year	EDMU	ERMU	EIMU
1976			
1977			
1978			
1979			
1980	98.2	81.7	70.2
1981	98.1	62.8	64.2
1982	69.5	49.2	59.3
1983	62.1	53.5	47.3
1984	71.7	48.2	47.3
1985	51.7	38.6	43.2
1986	83.9	43.5	50.1
1987	72.7	45.5	49.9
1988	63.3	39.6	51.6
1989	55.4	42.6	46.0
1990	63.2	47.3	52.1
1991	50.2	40.0	41.3
1992	58.1	42.3	49.8

* - Not available.
a - >50 to <75% operational and may not be representative.
b - Below 50% operational and results not representative.

Pollutant Name : SUSPENDED PARTICULATES

Ambient 24 Hr. Regulation = 100 µg/m3

CDMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK	Percentage of Readings > Standard 24 hr
1992	Jan	26.1	*	*	56.9	*	*	86.7	0.0
	Feb	61.5	*	*	76.4	*	*	110.4	25.0
	Mar	29.6	*	*	55.8	*	*	90.3	0.0
	Apr	31.9	*	*	38.5	*	*	51.1	0.0
	May	30.8	*	*	53.1	*	*	136.8	20.0
	Jun	33.4	*	*	48.9	*	*	91.0	0.0
	Jul	29.9	*	*	37.5	*	*	48.8	0.0
	Aug	21.9	*	*	36.8	*	*	61.0	0.0
	Sep	26.4	*	*	35.5	*	*	50.1	0.0
	Oct	38.2	*	*	56.5	*	*	122.6	20.0
	Nov	17.8	*	*	38.6	*	*	70.0	0.0
	Dec	26.5	*	*	47.8	*	*	101.2	20.0
CRMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK	24 hr
1992	Jan	25.9	*	*	45.1	*	*	68.1	0.0
	Feb	28.4	*	*	53.1	*	*	83.5	0.0
	Mar	27.6	*	*	46.7	*	*	71.2	0.0
	Apr	21.0	*	*	29.1	*	*	56.8	0.0
	May	29.2	*	*	53.9	*	*	122.7	20.0
	Jun	13.2	*	*	32.8	*	*	76.0	0.0
	Jul	15.6	*	*	24.2	*	*	37.0	0.0
	Aug	18.7	*	*	32.4	*	*	52.2	0.0
	Sep	18.7	*	*	30.4	*	*	50.3	0.0
	Oct	30.7	*	*	44.0	*	*	87.4	0.0
	Nov	12.1	*	*	21.8	*	*	46.7	0.0
	Dec	14.4	*	*	25.8	*	*	74.0	0.0
CIMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK	24 hr
1992	Jan	54.1	*	*	79.2	*	*	119.9	20.0
	Feb	55.5	*	*	81.2	*	*	123.5	25.0
	Mar	45.7	*	*	74.5	*	*	106.7	33.3
	Apr	33.5	*	*	47.5	*	*	108.9	20.0
	May	42.7	*	*	63.2	*	*	137.1	25.0
	Jun	33.1	*	*	57.5	*	*	100.5	20.0
	Jul	27.7	*	*	47.2	*	*	74.0	0.0
	Aug	57.4	*	*	64.1	*	*	76.3	0.0
	Sep	38.3	*	*	77.3	*	*	189.4	20.0
	Oct	89.2	*	*	116.4	*	*	180.8	40.0
	Nov	30.4	*	*	72.5	*	*	116.0	20.0
	Dec	24.5	*	*	68.1	*	*	246.9	20.0

Trend of the Average Annual Concentration

Year	CDMU	CRMU	CIMU
1976			
1977			
1978			
1979			
1980	165.0	70.4	150.0
1981	147.0	69.3	133.0
1982	117.0	48.7	98.1
1983	80.7	39.4	81.7
1984	72.1	40.6	70.0
1985	59.1	38.2	62.5
1986	79.5	49.5	83.4
1987	85.3	47.9	75.6
1988	76.8	38.7	71.1
1989	62.1	34.8	68.2
1990	62.4	41.2	73.9
1991	57.3	36.9	74.2
1992	48.5	36.6	70.7

* - Not available.
a - >50 to <75% operational and may not be representative.
b - Below 50% operational and results not representative.

Pollutant Name : SUSPENDED PARTICULATES

Ambient 24 Hr. Regulation = 100 µg/m3

EMMU	MIN	25 %	50 %	MEAN	75 %	90 %	PEAK	Percentage of Readings > Standard 24 hr
1992 Jan	10.4	*	*	16.3	*	*	23.7	0.0
Feb	16.2	*	*	26.0	*	*	43.0	0.0
Mar	17.5	*	*	35.4	*	*	53.7	0.0
Apr	17.0	*	*	23.9	*	*	57.1	0.0
May	21.7	*	*	46.3	*	*	110.9	20.0
Jun	23.3	*	*	35.3	*	*	50.1	0.0
Jul	18.1	*	*	26.5	*	*	39.8	0.0
Aug	10.9	*	*	22.0	*	*	46.4	0.0
Sep	14.0	*	*	21.7	*	*	40.9	0.0
Oct	32.3	*	*	44.9	*	*	78.0	0.0
Nov	12.9	*	*	27.6	*	*	58.8	0.0
Dec	10.7	*	*	10.7	*	*	10.7	0.0

Trend of the Average Annual Concentration

Year	Ellerslie	EMMU
1976		
1977		
1978		
1979		
1980		
1981		
1982		35.3
1983		34.4
1984		41.2
1985	14.3	30.7
1986	24.7	36.3
1987	28.5	42.6
1988	27.1	33.9
1989	20.8	28.5 a
1990	22.0	30.6
1991	26.2	26.3
1992	*	28.1

* - Not available.
a - >50 to <75% operational and may not be representative.
b - Below 50% operational and results not representative.

Pollutant Name : BENZO (A) PYRENE [µg/1000 m3]

EDMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.15	*	*	0.26	*	*	0.44
	Feb	0.06	*	*	0.22	*	*	0.76
	Mar	0.06	*	*	0.16	*	*	0.61
	Apr	0.04	*	*	0.11	*	*	0.71
	May	0.06	*	*	0.09	*	*	0.16
	Jun	0.04	*	*	0.10	*	*	0.60
	Jul	0.03	*	*	0.08	*	*	0.29
	Aug	0.01	*	*	0.03	*	*	0.08
	Sep	0.04	*	*	0.10	*	*	0.17
	Oct	0.08	*	*	0.17	*	*	0.34
	Nov	0.06	*	*	0.13	*	*	0.27
	Dec	0.11	*	*	0.38	*	*	0.98

ERMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.04	*	*	0.24	*	*	0.70
	Feb	0.01	*	*	0.08	*	*	0.22
	Mar	0.06	*	*	0.11	*	*	0.25
	Apr	0.02	*	*	0.03	*	*	0.04
	May	0.04	*	*	0.06	*	*	0.13
	Jun	0.01	*	*	0.03	*	*	0.06
	Jul	0.02	*	*	0.03	*	*	0.06
	Aug	0.01	*	*	0.02	*	*	0.06
	Sep	0.04	*	*	0.11	*	*	0.17
	Oct	0.04	*	*	0.15	*	*	0.50
	Nov	0.03	*	*	0.19	*	*	0.92
	Dec	0.02	*	*	0.17	*	*	1.49

EIMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.02	*	*	0.04	*	*	0.11
	Feb	0.01	*	*	0.03	*	*	0.06
	Mar	0.01	*	*	0.03	*	*	0.08
	Apr	0.01	*	*	0.01	*	*	0.05
	May	0.01	*	*	0.01	*	*	0.03
	Jun	0.01	*	*	0.02	*	*	0.05
	Jul	0.02	*	*	0.03	*	*	0.07
	Aug	0.01	*	*	0.02	*	*	0.04
	Sep	0.02	*	*	0.03	*	*	0.11
	Oct	0.04	*	*	0.09	*	*	0.15
	Nov	0.02	*	*	0.07	*	*	0.28
	Dec	0.04	*	*	0.12	*	*	0.43

Trend of the Average Annual Concentration

Year	EDMU	ERMU	EIMU
1976			
1977			
1978			
1979			
1980			
1981			
1982	0.22	0.11	0.07
1983	0.20	0.10	0.05
1984	0.25	0.14	0.11
1985	0.15	0.09	0.06
1986	0.38	0.17	0.07
1987	0.18	0.13	0.07
1988	0.52	0.21	0.09
1989	0.27	0.31	0.08
1990	0.27	0.25	0.05
1991	0.13	0.12	0.02
1992	0.15	0.10	0.04

* - Not available.
a - Between 50-75% operational and may not be representative.
b - Below 50% operational and results not representative.

Pollutant Name : BENZO (A) PYRENE [µg/1000 m3]

CDMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.04	*	*	0.21	*	*	0.91
	Feb	0.09	*	*	0.16	*	*	0.34
	Mar	0.02	*	*	0.04	*	*	0.20
	Apr	0.01	*	*	0.02	*	*	0.05
	May	0.02	*	*	0.04	*	*	0.07
	Jun	0.01	*	*	0.04	*	*	0.27
	Jul	0.03	*	*	0.05	*	*	0.08
	Aug	0.01	*	*	0.03	*	*	0.08
	Sep	0.07	*	*	0.08	*	*	0.11
	Oct	0.06	*	*	0.13	*	*	0.31
	Nov	0.05	*	*	0.16	*	*	0.38
	Dec	0.08	*	*	0.20	*	*	0.36

CRMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.02	*	*	0.09	*	*	0.18
	Feb	0.02	*	*	0.07	*	*	0.31
	Mar	0.01	*	*	0.02	*	*	0.05
	Apr	0.01	*	*	0.01	*	*	0.02
	May	0.01	*	*	0.02	*	*	0.03
	Jun	0.01	*	*	0.01	*	*	0.01
	Jul	0.01	*	*	0.01	*	*	0.01
	Aug	0.01	*	*	0.01	*	*	0.01
	Sep	0.01	*	*	0.02	*	*	0.03
	Oct	0.02	*	*	0.06	*	*	0.15
	Nov	0.02	*	*	0.05	*	*	0.10
	Dec	0.05	*	*	0.17	*	*	0.55

CIMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.04	*	*	0.25	*	*	1.19
	Feb	0.06	*	*	0.10	*	*	0.36
	Mar	0.02	*	*	0.06	*	*	0.17
	Apr	0.01	*	*	0.02	*	*	0.03
	May	0.01	*	*	0.03	*	*	0.06
	Jun	0.01	*	*	0.02	*	*	0.03
	Jul	0.01	*	*	0.02	*	*	0.03
	Aug	0.01	*	*	0.03	*	*	0.08
	Sep	0.02	*	*	0.03	*	*	0.06
	Oct	0.05	*	*	0.13	*	*	0.24
	Nov	0.03	*	*	0.17	*	*	0.70
	Dec	0.07	*	*	0.25	*	*	1.36

Trend of the Average Annual Concentration

Year	CDMU	CRMU	CIMU
1976			
1977			
1978			
1979			
1980			
1981			
1982	0.44	0.05	0.15
1983	0.31	0.06	0.15
1984	0.25	0.07	0.19
1985	0.12	0.03	0.10
1986	0.21	0.06	0.18
1987	0.27	0.07	0.14
1988	0.47	0.09	0.26
1989	0.41	0.09	0.24
1990	0.18	0.03	0.11
1991	0.13	0.03	0.12
1992	0.10	0.04	0.09

* - Not available.
a - Between 50-75% operational and may not be representative.
b - Below 50% operational and results not representative.

Pollutant Name : BENZO (A) PYRENE [µg/1000 m3]

EMMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.02	*	*	0.10	*	*	0.22
	Feb	0.01	*	*	0.04	*	*	0.25
	Mar	0.03	*	*	0.04	*	*	0.20
	Apr	0.01	*	*	0.01	*	*	0.01
	May	0.01	*	*	0.01	*	*	0.02
	Jun	0.01	*	*	0.01	*	*	0.01
	Jul	0.01	*	*	0.01	*	*	0.02
	Aug	0.01	*	*	0.01	*	*	0.01
	Sep	0.01	*	*	0.02	*	*	0.02
	Oct	0.01	*	*	0.04	*	*	0.16
	Nov	0.00	*	*	0.07	*	*	1.00
	Dec	0.04	*	*	0.04	*	*	0.04

Trend of the Average Annual Concentration

Year	Ellerslie	EMMU
1976		
1977		
1978		
1979		
1980		
1981		
1982		0.03
1983		0.03
1984		0.10
1985	0.01	0.03
1986	0.03	0.06
1987	0.02	0.05
1988	0.07	0.10
1989	0.03	0.03
1990	0.01	0.03
1991	0.01	0.03
1992	*	0.04

* - Not available.
a - Between 50-75% operational and may not be representative.
b - Below 50% operational and results not representative.

Pollutant Name : LEAD [µg/m3]

EDMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.00	*	*	0.01	*	*	0.03
	Feb	0.01	*	*	0.02	*	*	0.04
	Mar	0.02	*	*	0.03	*	*	0.06
	Apr	0.01	*	*	0.03	*	*	0.08
	May	0.00	*	*	0.01	*	*	0.04
	Jun	0.03	*	*	0.04	*	*	0.06
	Jul	0.03	*	*	0.04	*	*	0.07
	Aug	0.00	*	*	0.00	*	*	0.00
	Sep	0.00	*	*	0.01	*	*	0.04
	Oct	0.02	*	*	0.04	*	*	0.08
	Nov	0.00	*	*	0.01	*	*	0.12
	Dec	0.01	*	*	0.04	*	*	0.13

ERMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.01	*	*	0.02	*	*	0.04
	Feb	0.00	*	*	0.01	*	*	0.03
	Mar	0.02	*	*	0.02	*	*	0.03
	Apr	0.01	*	*	0.01	*	*	0.02
	May	0.00	*	*	0.00	*	*	0.01
	Jun	0.00	*	*	0.02	*	*	0.03
	Jul	0.02	*	*	0.03	*	*	0.06
	Aug	0.00	*	*	0.00	*	*	0.01
	Sep	0.00	*	*	0.00	*	*	0.02
	Oct	0.01	*	*	0.01	*	*	0.03
	Nov	0.00	*	*	0.01	*	*	0.01
	Dec	0.00	*	*	0.01	*	*	0.03

EIMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.01	*	*	0.02	*	*	0.04
	Feb	0.00	*	*	0.01	*	*	0.04
	Mar	0.00	*	*	0.01	*	*	0.03
	Apr	0.01	*	*	0.02	*	*	0.03
	May	0.00	*	*	0.00	*	*	0.01
	Jun	0.02	*	*	0.04	*	*	0.09
	Jul	0.01	*	*	0.02	*	*	0.03
	Aug	0.00	*	*	0.01	*	*	0.03
	Sep	0.00	*	*	0.01	*	*	0.04
	Oct	0.01	*	*	0.01	*	*	0.03
	Nov	0.00	*	*	0.00	*	*	0.04
	Dec	0.00	*	*	0.01	*	*	0.07

Trend of the Average Annual Concentration

Year	EDMU	ERMU	EIMU
1976			
1977			
1978			
1979			
1980	0.53	0.48	0.22
1981	0.52	0.42	0.20
1982	0.46	0.37	0.19
1983	0.36	0.32	0.13
1984	0.41	0.31	0.13
1985	0.30	0.23	0.11
1986	0.23	0.19	0.09
1987	0.18	0.14	0.06
1988	0.16	0.12	0.07
1989	0.22	0.19	0.07
1990	0.08	0.10	0.04
1991	0.05	0.02	0.02
1992	0.02	0.01	0.01

* - Not available.
a - Between 50-75% operational and may not be representative.
b - Below 50% operational and results not representative.

Pollutant Name : LEAD [µg/m3]

CDMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.01	*	*	0.02	*	*	0.05
	Feb	0.01	*	*	0.02	*	*	0.03
	Mar	0.00	*	*	0.01	*	*	0.03
	Apr	0.02	*	*	0.02	*	*	0.03
	May	0.00	*	*	0.01	*	*	0.02
	Jun	0.01	*	*	0.03	*	*	0.04
	Jul	0.01	*	*	0.03	*	*	0.05
	Aug	0.00	*	*	0.00	*	*	0.00
	Sep	0.01	*	*	0.01	*	*	0.02
	Oct	0.00	*	*	0.01	*	*	0.04
	Nov	0.00	*	*	0.00	*	*	0.03
	Dec	0.00	*	*	0.01	*	*	0.05

CRMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.00	*	*	0.01	*	*	0.02
	Feb	0.00	*	*	0.01	*	*	0.02
	Mar	0.00	*	*	0.00	*	*	0.02
	Apr	0.00	*	*	0.00	*	*	0.03
	May	0.00	*	*	0.00	*	*	0.00
	Jun	0.00	*	*	0.01	*	*	0.03
	Jul	0.01	*	*	0.02	*	*	0.04
	Aug	0.00	*	*	0.00	*	*	0.00
	Sep	0.00	*	*	0.00	*	*	0.02
	Oct	0.00	*	*	0.01	*	*	0.02
	Nov	0.00	*	*	0.00	*	*	0.01
	Dec	0.00	*	*	0.01	*	*	0.02

CIMU		MIN	25 %	50 %	MEAN	75 %	90 %	PEAK
1992	Jan	0.02	*	*	0.04	*	*	0.12
	Feb	0.00	*	*	0.01	*	*	0.03
	Mar	0.02	*	*	0.03	*	*	0.05
	Apr	0.01	*	*	0.02	*	*	0.04
	May	0.00	*	*	0.00	*	*	0.03
	Jun	0.03	*	*	0.03	*	*	0.04
	Jul	0.02	*	*	0.03	*	*	0.03
	Aug	0.00	*	*	0.00	*	*	0.00
	Sep	0.00	*	*	0.02	*	*	0.10
	Oct	0.01	*	*	0.03	*	*	0.05
	Nov	0.00	*	*	0.01	*	*	0.07
	Dec	0.00	*	*	0.01	*	*	0.09

Trend of the Average Annual Concentration

Year	CDMU	CRMU	CIMU
1976			
1977			
1978			
1979			
1980	0.66	0.34	0.42
1981	0.64	0.26	0.48
1982	0.61	0.28	0.43
1983	0.44	0.23	0.41
1984	0.39	0.16	0.38
1985	0.27	0.13	0.30
1986	0.24	0.11	0.31
1987	0.18	0.09	0.22
1988	0.16	0.07	0.25
1989	0.17	0.10	0.25
1990	0.09	0.05	0.14
1991	0.03	0.02	0.05
1992	0.01	0.01	0.02

* - Not available.
a - Between 50-75% operational and may not be representative.
b - Below 50% operational and results not representative.

```
||-----------------------------------------------------------||
||Pollutant Name :  LEAD [µg/m3]                              ||
||-----------------------------------------------------------||
||EMMU          MIN  25 %  50 %  MEAN  75 %  90 %  PEAK      ||
||-----------------------------------------------------------||
|| 1992 Jan     0.00   *     *   0.01    *     *   0.03      ||
||      Feb     0.00   *     *   0.00    *     *   0.01      ||
||      Mar     0.00   *     *   0.00    *     *   0.02      ||
||      Apr     0.00   *     *   0.00    *     *   0.02      ||
||      May     0.00   *     *   0.00    *     *   0.00      ||
||      Jun     0.00   *     *   0.01    *     *   0.03      ||
||      Jul     0.02   *     *   0.02    *     *   0.03      ||
||      Aug     0.00   *     *   0.00    *     *   0.02      ||
||      Sep     0.00   *     *   0.00    *     *   0.01      ||
||      Oct     0.00   *     *   0.01    *     *   0.01      ||
||      Nov     0.00   *     *   0.00    *     *   0.01      ||
||      Dec     0.01   *     *   0.01    *     *   0.01      ||
||-----------------------------------------------------------||
||           Trend of the Average Annual Concentration       ||
||-------------------+---------------------------------------||
||              Year |  Ellerslie          EMMU              ||
||-------------------+---------------------------------------||
||              1976 |                                       ||
||              1977 |                                       ||
||              1978 |                                       ||
||              1979 |                                       ||
||              1980 |                                       ||
||              1981 |                                       ||
||              1982 |                      0.10             ||
||              1983 |                      0.11             ||
||              1984 |                      0.15             ||
||              1985 |    0.03              0.10             ||
||              1986 |    0.03              0.07             ||
||              1987 |    0.02              0.07             ||
||              1988 |    0.04              0.04             ||
||              1989 |    0.04              0.06             ||
||              1990 |    0.02              0.03             ||
||              1991 |    0.01              0.01             ||
||              1992 |     *                0.01             ||
||-------------------+---------------------------------------||
    * - Not available.
    a - Between 50-75% operational and may not be representative.
    b - Below 50% operational and results not representative.
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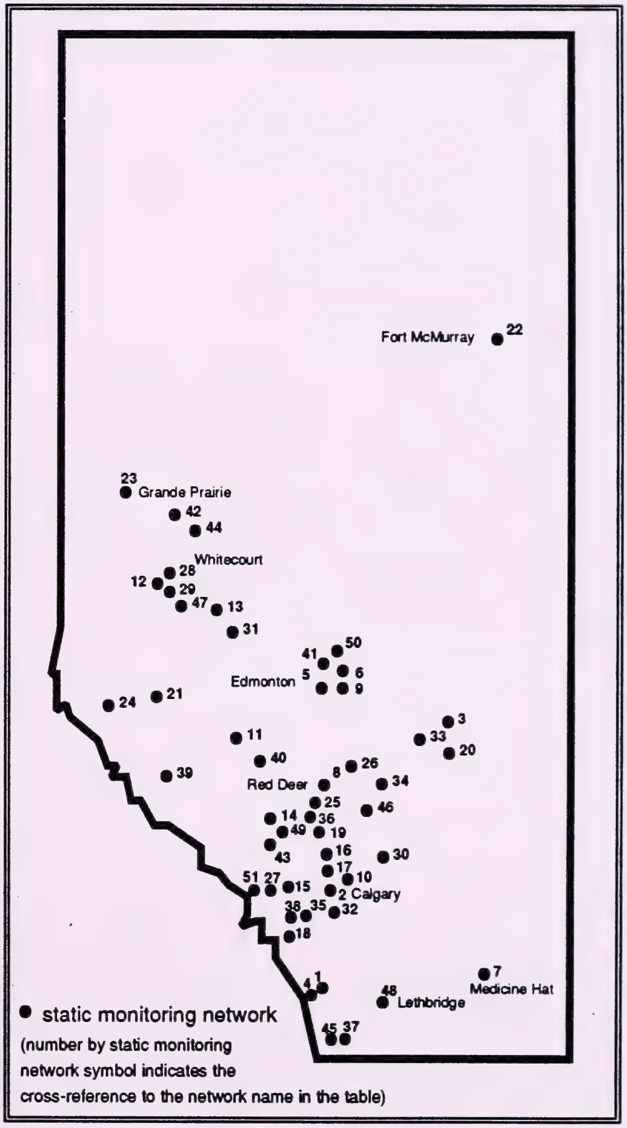
LOCATION OF STATIC AIR QUALITY MONITORING NETWORKS

Map Location	Network Location
1	Blairmore
2	Calgary
3	Camrose
4	Coleman
5	Edmonton
6	Fort Saskatchewan
7	Medicine Hat
8	Red Deer
9	Sherwood Park
10	Balzac
11	Buck Lake
12	Bigstone
13	Blue Ridge
14	Caroline
15	Cochrane
16	Carstairs
17	Crossfield
18	Diamond Valley
19	Didsbury
20	Edburg
21	Edson
22	Fort McMurray
23	Grande Prairie
24	Hinton
25	Innisfail
26	Joffre
27	Jumping Pound
28	Kaybob
29	Kaybob (south)
30	Lone Pine Creek
31	Mayerthorpe
32	Mazeppa
33	New Norway
34	Nevis
35	Okotoks
36	Olds
37	Pincher Creek
38	Quirk Creek
39	Ram River
40	Rimbey
41	St. Albert
42	Simonette
43	Sundre
44	Valleyview
45	Waterton
46	Wimborne
47	Windfall
48	Lethbridge
49	Raven Brood
50	Redwater
51	Exshaw



STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: TOTAL DUSTFALL
MONITORING PERIOD: ONE MONTH
REGULATION: 53 MG/100CM2/30 DAYS (RESIDENTIAL)
REGULATION: 158 MG/100CM2/30 DAYS (INDUSTRIAL)
UNITS: MG/100CM2/30 DAYS

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG	# OF STATIONS
Blairmore	17.3	31.1	38.8	48.4	63.7	149.7	48.8	65.3	29.1	36.9	11.0	5.4	44.7	2
Calgary	64.4	45.6	65.8	54.0	85.2	64.0	79.8	*	102.8	101.6	62.9	71.2	67.4	3
Camrose	17.6	13.9	50.6	78.5	*	40.4	29.0	36.1	31.1	24.3	10.6	1.4	30.3	1
Coleman	34.5	15.4	37.5	30.7	45.6	183.4	76.5	31.9	25.5	31.8	29.6	17.4	47.0	11
Edmonton	15.3	31.1	109.1	103.0	86.3	79.1	80.3	64.1	70.6	42.6	23.0	8.2	59.9	26
EDMU	30.2	72.7	155.9	208.4	127.4	95.3	60.2	60.6	156.4	58.7	91.7	15.3	94.4	1
EIMU	13.4	20.5	32.4	25.1	43.1	22.9	37.6	49.9	29.4	36.2	10.8	15.3	28.0	1
ERMU	12.4	13.4	27.0	26.5	30.3	24.1	33.9	49.1	15.0	18.5	6.1	5.7	21.8	1
Exshaw	53.0	35.7	38.2	23.8	155.8	57.7	87.2	58.9	33.3	38.9	*	58.7	55.3	5
Fort Saskatchewan (Special)	11.5	11.8	11.8	13.2	33.4	6.0	19.3	22.9	27.2	21.4	10.1	1.1	15.8	1
Lethbridge	275.0	68.8	62.2	175.4	17.8	263.9	55.7	73.6	134.4	161.2	198.4	161.1	137.3	1
Red Deer	12.4	*	*	*	*	*	*	*	*	*	*	*	12.4	1
Sherwood Park	30.8	34.0	26.7	44.4	45.7	26.5	46.8	124.0	34.1	49.8	11.5	3.5	39.8	3

STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: FIXED DUSTFALL
MONITORING PERIOD: ONE MONTH
UNITS: MG/100CM2/30 DAYS

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG	# OF STATIONS
Blairmore	9.1	16.8	23.5	34.0	48.7	65.3	15.2	47.6	13.5	26.2	9.9	.4	24.8	2
Calgary	43.7	29.2	38.2	35.3	63.7	23.6	36.8	*	59.0	50.8	41.9	45.4	40.7	3
Camrose	5.3	3.3	36.4	54.2	*	28.4	18.2	19.4	13.9	16.2	7.4	.0	18.4	1
Coleman	22.3	7.4	13.1	16.1	27.8	85.3	9.7	21.6	9.5	15.8	22.6	9.9	22.0	11
Edmonton	5.0	14.8	57.1	66.4	61.8	48.5	49.5	33.6	39.2	23.0	13.2	1.0	34.8	26
EDMU	21.3	52.4	132.9	179.8	107.3	85.0	40.1	38.5	94.1	47.4	81.8	3.8	73.7	1
EIMU	7.6	10.6	24.3	17.9	31.2	14.5	23.8	31.1	24.4	24.4	8.8	5.1	18.6	1
ERMU	4.1	4.8	17.5	20.1	21.1	15.1	11.9	30.3	7.2	16.3	4.7	.0	12.8	1
Exshaw	41.7	21.4	20.6	10.4	73.1	25.6	34.7	45.4	25.6	27.3	*	45.4	31.5	5
Fort Saskatchewan (Special)	2.9	2.5	3.7	4.9	24.8	5.4	2.8	13.1	5.7	7.4	.0	.0	6.1	1
Lethbridge	250.2	57.7	44.5	153.6	11.5	184.8	31.7	63.2	118.6	123.3	169.8	62.8	106.0	1
Red Deer	8.2	*	*	*	*	*	*	*	*	*	*	*	8.2	1
Sherwood Park	6.0	20.3	18.4	30.4	34.7	10.7	14.1	20.4	15.0	21.7	1.1	.8	16.1	3

* data not available

STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: CALCIUM
MONITORING PERIOD: ONE MONTH
UNITS: MG/100CM2/30 DAYS

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG	# OF STATIONS
Edmonton	.4	.6	4.3	7.5	4.3	3.6	2.0	3.7	2.3	1.9	1.6	1.3	3.0	3
EIMU	.4	1.1	1.2	.8	.9	.3	.6	1.6	1.1	.9	1.5	1.1	1.0	1
ERMU	.2	.2	.6	.5	.5	.2	.8	.4	.3	.6	.8	1.1	.5	1
Exshaw	7.3	5.0	4.5	3.3	11.2	2.7	5.7	4.0	5.4	3.6	*	7.3	5.2	5

* data not available

STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: TOTAL SULPHATION
MONITORING PERIOD: ONE MONTH
GUIDELINE: 0.50 MG/DAY/100 CM2
UNITS: MG/DAY/100 CM2

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG	# OF STATIONS
Calgary	.052	.060	.062	.047	.043	.030	.040	.043	.034	.048	.054	.068	.049	11
Camrose	.070	*	.056	.029	*	.018	.022	.021	.033	.041	.054	.078	.042	1
Edmonton	.048	.071	.045	.031	.028	.032	.028	.033	.031	.043	.042	.083	.043	26
EDMU	.022	*	.029	.016	.013	.021	.016	.027	.016	.023	.025	.047	.023	1
EIMU	.069	*	.062	.047	.036	.037	.060	.039	.034	.067	.045	.098	.054	1
ERMU	.055	*	.045	.028	.027	.028	.034	.027	.035	.049	.047	.087	.042	1
Fort McMurray	.062	.064	.071	.071	*	.049	*	.053	.029	.052	.038	*	.054	6
Fort Saskatchewan	.090	.111	.073	.089	.061	.054	.042	.050	.086	.077	.064	.154	.080	4
Fort Saskatchewan (Special)	.057	*	.055	.063	.034	.031	.029	.039	.052	.070	.072	.145	.059	1
Grande Prairie	.011	*	.013	.010	.011	.013	.009	.008	.007	.013	.010	*	.011	1
Hinton	.005	.015	.006	.007	.004	.005	.004	.004	.013	.010	.002	.008	.007	3
Joffre	.032	*	*	*	*	*	*	*	*	*	*	*	.032	2
Lethbridge	.023	.033	.025	.022	.016	.012	.014	.017	.016	.021	.026	.051	.023	5
Medicine Hat	.023	.031	.023	.022	.017	.019	.015	.021	.019	.020	.029	.044	.023	4
New Norway	.076	*	*	*	*	*	*	*	*	*	*	*	.076	1
Raven Brood	.015	*	*	.022	.014	.011	.009	.009	.008	.021	*	.037	.016	3
Red Deer	.024	*	*	*	*	*	*	*	*	*	*	*	.024	2
Redwater	.082	.117	.064	.060	.047	.054	.037	.050	.037	.060	.048	*	.060	4
Sherwood Park	.072	.080	.069	.023	.032	.043	.057	.037	.086	.046	.087	.093	.061	3
St. Albert	.015	.031	.010	.009	.008	.005	.007	.009	.009	.010	.011	.023	.012	2

* data not available

STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: TOTAL SULPHATION
MONITORING PERIOD: THREE MONTHS
GUIDELINE: 0.50 MG/DAY/100 CM2
UNITS: MG/DAY/100 CM2

STATION	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	AVG	# OF STATIONS
Balzac	.067	.041	.041	*	.058	4
Bigstone	*	*	*	*	*	2
Blue Ridge	*	*	*	*	*	4
Buck Lake	*	*	*	*	*	4
Caroline	*	*	*	*	*	1
Carstairs	.013	.034	.025	.049	.030	4
Cochrane	.047	.039	.045	.073	.051	4
Coleman	.095	.080	.083	.069	.083	4
Crossfield	.071	.044	.038	.030	.048	5
Diamond Valley	.028	.020	.526	.085	.165	4
Didsbury	*	*	*	*	*	6
Edburg	*	*	*	*	*	1
Edson	.024	.017	.011	.098	.038	4
Innisfail	*	*	*	*	*	3
Jumping Pound	.017	.038	.038	.052	.036	4
Kaybob	*	*	*	*	*	4
Kaybob (south)	*	*	*	*	*	4
Lone Pine Creek	.036	.024	.022	.021	.026	5
Mayerthorpe	*	*	*	*	*	2
Mazeppa	.039	.037	.030	.030	.034	4
Nevis	*	*	*	*	*	7
Okotoks	.024	.015	.027	.037	.026	5
Olds	*	*	*	*	*	4
Pincher Creek	.043	.021	.024	.021	.027	6
Quirk Creek	.029	.033	.024	.027	.028	6
Ram River	*	*	*	*	*	5
Red Deer	*	*	*	*	*	3
Redwater	.179	.114	.120	.197	.153	4
Rimbey	*	*	*	*	*	4
Simonette	*	*	*	*	*	2
Sundre	*	*	*	*	*	2
Valleyview	*	*	*	*	*	2
Waterton	.125	.073	.081	.062	.085	8
Wimborne	*	*	*	*	*	2
Windfall	*	*	*	*	*	4

* data not available

STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: HYDROGEN SULPHIDE
MONITORING PERIOD: ONE MONTH
GUIDELINE: 0.10 MG/DAY/100 CM2
UNITS: MG/DAY/100 CM2

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG	# OF STATIONS
Camrose	.034	.000	.017	.015	*	.000	.006	.013	.007	.006	.025	.010	.012	1
Fort McMurray	.008	.020	.017	.036	*	.003	*	.003	.015	.015	.041	*	.018	6
Fort Saskatchewan (Special)	.008	.022	.012	.018	.012	.003	.006	.018	.007	.015	.069	.011	.017	1
Grande Prairie	.004	.000	.003	.009	.003	.006	.003	.009	.013	.011	.007	*	.006	1
Hinton	.003	.008	.005	.007	.009	.002	.002	.015	.007	.007	.013	.000	.006	3
Joffre	.002	*	*	*	*	*	*	*	*	*	*	*	.002	2
New Norway	.002	*	*	*	*	*	*	*	*	*	*	*	.002	1
Red Deer	.001	*	*	*	*	*	*	*	*	*	*	*	.001	2
Sherwood Park	.018	.019	.015	.011	.014	.007	.005	.009	.019	.013	.025	.011	.014	3
St. Albert	.010	.010	.006	.006	.006	.003	.004	.001	.009	.010	.031	.006	.008	2

* data not available

STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: HYDROGEN SULPHIDE
MONITORING PERIOD: THREE MONTHS
GUIDELINE: 0.10 MG/DAY/100 CM2
UNITS: MG/DAY/100 CM2

STATION	JAN-MAR	APR-JUN	JUL-SEP	OCT-DEC	AVG	# OF STATIONS
Balzac	.005	.006	.003	.008	.006	4
Bigstone	*	*	*	*	*	2
Blue Ridge	*	*	*	*	*	4
Buck Lake	*	*	*	*	*	4
Caroline	*	*	*	*	*	1
Carstairs	.003	.000	.002	.008	.003	4
Cochrane	.006	.002	.007	.007	.005	4
Coleman	.015	.005	.005	.008	.008	4
Crossfield	.006	.000	.003	.008	.004	5
Diamond Valley	.003	.001	.001	.008	.003	4
Didsbury	*	*	*	*	*	5
Edburg	*	*	*	*	*	1
Edson	.002	.000	.002	.003	.001	4
Innisfail	*	*	*	*	*	2
Jumping Pound	.004	.003	.005	.008	.005	4
Kaybob	*	*	*	*	*	4
Kaybob (south)	*	*	*	*	*	4
Lone Pine Creek	.004	.008	.006	.004	.005	5
Mayerthorpe	*	*	*	*	*	2
Mazeppa	.002	.000	.006	.005	.003	4
Nevis	*	*	*	*	*	7
Okotoks	.005	.008	.005	.009	.007	4
Olds	*	*	*	*	*	4
Pincher Creek	.004	.000	.005	.006	.004	6
Quirk Creek	.003	.001	.004	.004	.003	6
Ram River	*	*	*	*	*	5
Red Deer	*	*	*	*	*	4
Redwater	.025	.002	.010	.016	.013	4
Rimbey	*	*	*	*	*	4
Simonette	*	*	*	*	*	2
Sundre	*	*	*	*	*	2
Valleyview	*	*	*	*	*	2
Waterton	.008	.000	.005	.003	.004	8
Wimborne	*	*	*	*	*	2
Windfall	*	*	*	*	*	4

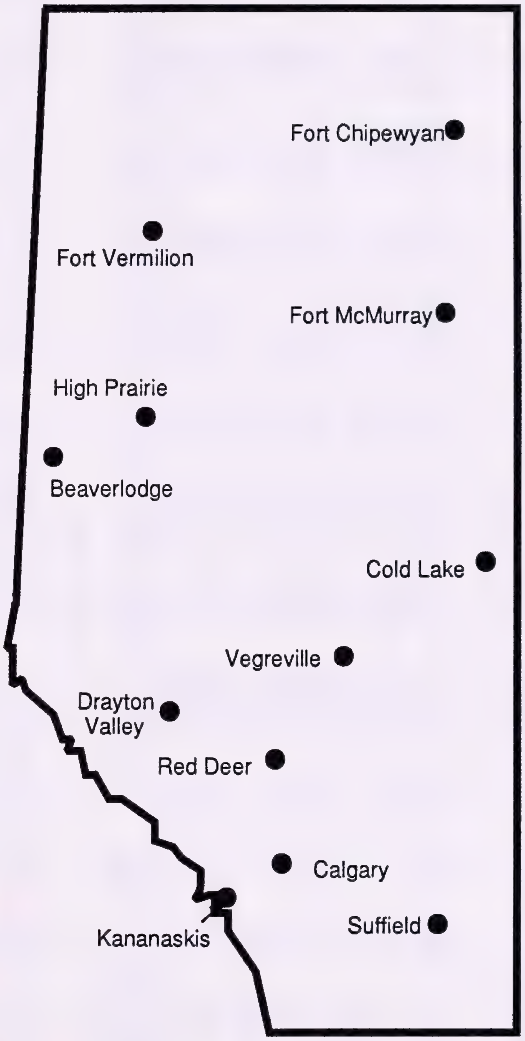
* data not available

STATIC MONITORING RESULTS
YEAR: 1992
POLLUTANT: FLUORIDE
MONITORING PERIOD: ONE MONTH
GUIDELINE: 40 UG/100 CM2/30 DAYS
UNITS: UG/100 CM2/30 DAYS

STATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	AVG	# OF STATIONS
Fort Saskatchewan	.9	1.6	1.0	1.5	2.8	1.2	.5	.9	.2	.2	.5	.7	1.0	1
Redwater	.9	2.2	1.7	2.6	5.2	4.3	4.9	4.7	1.4	1.4	2.2	*	2.8	4

* data not available

LOCATION OF ACID PRECIPITATION MONITORING STATIONS



● acid precipitation monitoring station

Alberta
ENVIRONMENTAL PROTECTION
Environmental Assessment Division
Environmental Quality Monitoring Branch

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: BEAVERLODGE

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	31	188	5.9	5.50	-0.0002	0.019	0.040	<0.001	0.033	<0.001	0.022	0.012	0.007	0.001
February	29	164	5.1	5.41	-0.0001	0.015	0.035	0.001	0.016	<0.001	0.009	0.008	0.005	0.001
March	31	181	5.6	5.25	0.0001	0.019	0.029	0.002	0.006	<0.001	0.004	0.002	0.005	<0.001
April	30	343	10.7	5.02	0.0017	0.097	0.062	0.021	0.008	<0.001	0.004	0.004	0.013	0.003
May	31	665	20.8	4.85	0.0042	0.240	0.114	0.039	0.018	<0.001	0.008	0.009	0.030	0.006
June	30	1320	41.2	4.87	0.0052	0.372	0.218	0.033	0.017	<0.001	0.012	0.029	0.065	0.014
July	31	1659	51.8	4.80	0.0107	0.556	0.234	0.080	0.021	<0.001	0.010	0.017	0.056	0.010
August	31	1333	41.6	4.97	0.0035	0.205	0.141	0.009	0.038	<0.001	0.023	0.019	0.057	0.010
	244	5853	182.6	4.90	0.025	1.522	0.872	0.186	0.158	<0.001	0.093	0.101	0.237	0.045

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
31-Aug-1992	15-Sep-1992	15	1147	35.8	5.17	0.0028	0.155	0.069	0.018	0.018	<0.001	0.012	0.015	0.018	0.004
15-Sep-1992	23-Sep-1992	8	378	11.8	5.28	0.0007	0.036	0.028	0.006	0.005	<0.001	0.003	0.004	0.008	0.002
23-Sep-1992	30-Sep-1992	7	417	13.0	4.88	0.0019	0.096	0.026	0.008	0.005	<0.001	0.004	0.002	0.006	<0.001
30-Sep-1992	7-Oct-1992	7	51	1.6	4.52	0.0005	0.027	0.032	0.005	0.003	<0.001	0.006	<0.001	0.006	<0.001
7-Oct-1992	14-Oct-1992	no sample													
14-Oct-1992	21-Oct-1992	7	42	1.3	5.15	0.0001	0.010	0.008	0.001	0.004	<0.001	0.005	0.002	0.002	<0.001
21-Oct-1992	28-Oct-1992	7	105	3.3	5.91	0.0005	0.014	0.008	0.009	0.007	<0.001	0.006	0.005	0.002	0.001
28-Oct-1992	4-Nov-1992	7	80	2.5	5.63	0.0002	0.004	0.005	0.002	0.001	<0.001	<0.001	0.001	0.002	<0.001
4-Nov-1992	11-Nov-1992	7	77	2.4	5.12	0.0002	0.006	0.010	0.002	0.001	<0.001	<0.001	0.001	0.001	<0.001
11-Nov-1992	18-Nov-1992	7	62	1.9	5.12	0.0003	0.019	0.012	0.005	0.004	<0.001	0.003	0.002	0.003	<0.001
18-Nov-1992	9-Dec-1992	no sample													
9-Dec-1992	16-Dec-1992	7	21	0.7	6.33	0.0001	0.003	0.003	0.002	0.002	<0.001	0.002	0.001	0.002	<0.001
16-Dec-1992	23-Dec-1992	7	90	2.8	5.19	0.0000	0.005	0.017	<0.001	0.003	<0.001	0.003	0.002	0.003	<0.001
23-Dec-1992	30-Dec-1992	7	228	7.1	5.62	0.0001	0.005	0.004	<0.001	0.001	<0.001	0.001	0.001	0.003	<0.001
30-Dec-1992	6-Jan-1993	7	15	0.5	5.15	0.0000	0.002	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
		100	2713	84.7	5.14	0.007	0.381	0.227	0.058	0.055	<0.001	0.045	0.038	0.057	0.007

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	244	5853	182.6	4.90	0.025	1.522	0.872	0.186	0.158	<0.001	0.093	0.101	0.237	0.045
weekly	100	2713	84.7	5.14	0.007	0.381	0.227	0.058	0.055	<0.001	0.045	0.038	0.057	0.007
annual	344	8566	267.3	4.96	0.032	1.903	1.099	0.244	0.213	<0.001	0.138	0.139	0.294	0.052

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: CALGARY

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	31	49	1.5	6.30	-0.0001	0.035	0.027	0.003	0.018	<0.001	0.012	0.001	0.082	0.008
February	28	75	2.3	5.61	0.0008	0.058	0.065	0.022	0.022	<0.001	0.014	0.002	0.035	0.007
March	32	178	5.6	5.73	0.0028	0.243	0.168	0.072	0.020	<0.001	0.015	0.003	0.077	0.015
April	31	536	16.7	6.48	0.0058	0.377	0.274	0.139	0.026	<0.001	0.016	0.008	0.134	0.026
May	33	1383	43.2	6.26	0.0099	0.562	0.362	0.214	0.019	<0.001	0.011	0.020	0.196	0.038
June	29	5130	160.1	6.77	0.1598	2.582	0.980	2.670	0.384	0.368	0.335	0.234	0.536	0.090
July	29	1998	62.3	5.30	0.0156	0.981	0.521	0.287	0.025	<0.001	0.010	0.014	0.207	0.037
August	31	571	17.8	6.19	0.0038	0.332	0.213	0.096	0.016	0.006	0.006	0.004	0.144	0.025
	244	9920	309.5	5.89	0.198	5.169	2.609	3.504	0.529	0.374	0.418	0.286	1.411	0.245

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
31-Aug-1992	16-Sep-1992	16	1023	31.9	5.13	0.0050	0.320	0.145	0.067	0.010	<0.001	0.008	0.006	0.071	0.010
16-Sep-1992	23-Sep-1992		55	1.7	6.09	0.0000	0.008	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.007	0.002
23-Sep-1992	30-Sep-1992		93	2.9	5.05	0.0005	0.053	0.021	0.007	0.001	<0.001	<0.001	0.001	0.012	0.002
30-Sep-1992	7-Oct-1992	7	104	3.2	5.07	0.0007	0.075	0.051	0.016	0.003	<0.001	0.002	0.001	0.021	0.004
7-Oct-1992	14-Oct-1992	7	54	1.7	5.61	0.0003	0.026	0.009	0.006	0.001	<0.001	0.001	<0.001	0.006	0.001
14-Oct-1992	21-Oct-1992	no sample													
21-Oct-1992	28-Oct-1992	7	35	1.1	5.69	0.0003	0.018	0.014	0.007	0.002	<0.001	0.001	<0.001	0.005	0.001
28-Oct-1992	4-Nov-1992	7	241	7.5	5.53	0.0002	0.016	0.004	<0.001	0.008	<0.001	0.005	<0.001	0.014	0.003
4-Nov-1992	10-Nov-1992	6	341	10.6	5.19	0.0025	0.110	0.105	0.047	0.017	<0.001	0.014	0.001	0.011	0.002
10-Nov-1992	18-Nov-1992	8	93	2.9	5.79	0.0013	0.059	0.045	0.027	0.036	<0.001	0.022	0.001	0.010	0.002
18-Nov-1992	25-Nov-1992	no sample													
25-Nov-1992	2-Dec-1992	7	305	9.5	5.18	0.0004	0.067	0.031	0.002	0.006	<0.001	0.004	<0.001	0.016	0.003
2-Dec-1992	9-Dec-1992	no sample													
9-Dec-1992	16-Dec-1992	7	156	4.9	6.41	-0.0002	0.023	0.042	0.004	0.010	0.021	0.022	<0.001	0.035	0.006
16-Dec-1992	23-Dec-1992	7	9	0.3	4.33	0.0001	0.006	0.008	<0.001	0.002	<0.001	0.001	<0.001	0.002	<0.001
23-Dec-1992	30-Dec-1992	7	51	1.6	5.68	0.0000	0.031	0.020	0.003	0.013	<0.001	0.010	<0.001	0.013	0.003
30-Dec-1992	6-Jan-1993	7	19	0.6	5.24	0.0000	0.004	0.006	<0.001	0.002	<0.001	0.001	<0.001	0.002	<0.001
		107	2579	80.5	5.25	0.011	0.816	0.501	0.185	0.113	0.021	0.091	0.011	0.226	0.038

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	244	9920	309.5	5.89	0.198	5.169	2.609	3.504	0.529	0.374	0.418	0.286	1.411	0.245
weekly	107	2579	80.5	5.25	0.011	0.816	0.501	0.185	0.113	0.021	0.091	0.011	0.226	0.038
annual	351	12499	390.0	5.66	0.209	5.985	3.110	3.689	0.642	0.395	0.509	0.297	1.637	0.283

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: COLD LAKE

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	30	464	14.5	5.29	0.0004	0.045	0.110	0.014	0.017	<0.001	0.013	0.008	0.017	0.003
February	29	186	5.8	5.20	0.0000	0.035	0.048	0.003	0.005	<0.001	0.014	<0.001	0.008	0.002
March	33	123	3.8	4.85	0.0018	0.107	0.106	0.039	0.006	<0.001	0.004	0.002	0.016	0.003
April	29	212	6.6	6.12	0.0037	0.207	0.121	0.079	0.007	<0.001	0.007	0.007	0.042	0.009
May	31	1087	33.9	5.38	0.0051	0.280	0.235	0.099	0.015	<0.001	0.009	0.011	0.054	0.011
June	30	2482	77.4	5.36	0.0082	0.314	0.303	0.129	0.026	<0.001	0.011	0.060	0.054	0.018
July	31	1732	54.0	4.90	0.0083	0.414	0.239	0.066	0.019	<0.001	0.011	0.010	0.046	0.011
August	31	1488	46.4	5.26	0.0047	0.238	0.128	0.056	0.015	<0.001	0.015	0.010	0.037	0.010
	244	7774	242.6	5.18	0.032	1.640	1.290	0.484	0.110	<0.001	0.085	0.107	0.274	0.068

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
1-Sep-1992	16-Sep-1992	16	335	10.5	4.85	0.0020	0.108	0.075	0.022	0.006	<0.001	0.003	0.004	0.013	0.003
16-Sep-1992	23-Sep-1992	7	73	2.3	5.26	0.0006	0.026	0.015	0.009	0.001	<0.001	<0.001	0.001	0.002	<0.001
23-Sep-1992	30-Sep-1992	no sample													
30-Sep-1992	7-Oct-1992	7	88	2.7	4.70	0.0004	0.057	0.059	0.009	0.003	<0.001	0.007	<0.001	0.013	0.002
7-Oct-1992	14-Oct-1992	7	130	4.1	5.24	0.0005	0.042	0.066	0.015	0.003	<0.001	0.003	0.002	0.012	0.003
14-Oct-1992	21-Oct-1992	7	133	4.2	5.32	0.0008	0.036	0.056	0.020	0.001	<0.001	0.001	0.002	0.008	0.002
21-Oct-1992	28-Oct-1992	no sample													
28-Oct-1992	4-Nov-1992	7	133	4.2	5.61	0.0007	0.028	0.049	0.018	0.003	<0.001	0.001	0.001	0.010	0.002
4-Nov-1992	18-Nov-1992	14	95	3.0	5.98	0.0005	0.024	0.028	0.012	0.005	<0.001	0.002	0.001	0.011	0.002
18-Nov-1992	25-Nov-1992	7	263	8.2	5.02	0.0005	0.025	0.065	0.007	0.004	<0.001	0.001	0.003	0.008	0.001
25-Nov-1992	2-Dec-1992	7	237	7.4	5.57	0.0003	0.023	0.034	0.008	0.004	<0.001	0.002	0.002	0.012	0.003
2-Dec-1992	9-Dec-1992	no sample													
9-Dec-1992	16-Dec-1992	7	83	2.6	4.85	0.0000	0.007	0.041	0.001	0.002	<0.001	0.002	0.001	0.005	0.001
16-Dec-1992	22-Dec-1992	6	10	0.3	4.96	0.0000	0.001	0.006	<0.001	0.001	<0.001	<0.001	<0.001	0.002	<0.001
22-Dec-1992	6-Jan-1993	15	211	6.6	4.92	0.0001	0.017	0.064	<0.001	0.008	<0.001	0.005	0.006	0.008	0.002
		107	1791	55.9	5.24	0.006	0.396	0.557	0.121	0.040	<0.001	0.027	0.023	0.103	0.021

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	244	7774	242.6	5.18	0.032	1.640	1.290	0.484	0.110	<0.001	0.085	0.107	0.274	0.068
weekly	107	1791	55.9	5.24	0.006	0.396	0.557	0.121	0.040	<0.001	0.027	0.023	0.103	0.021
annual	351	9565	298.5	5.19	0.038	2.036	1.847	0.605	0.150	<0.001	0.112	0.130	0.377	0.089

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: DRAYTON VALLEY

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	33	456	14.2	5.76	0.0016	0.070	0.118	0.043	0.013	<0.001	0.008	0.003	0.035	0.005
February	25	163	5.1	5.60	0.0011	0.055	0.123	0.036	0.006	<0.001	0.004	0.002	0.018	0.003
March	34	247	7.7	6.18	0.0044	0.117	0.064	0.079	0.013	<0.001	0.013	0.006	0.029	0.006
April	23	202	6.3	6.64	0.0038	0.170	0.097	0.077	0.012	<0.001	0.008	0.022	0.047	0.010
May	31	2461	76.8	6.17	0.0252	0.853	0.374	0.452	0.047	<0.001	0.038	0.045	0.174	0.044
June	31	1044	32.6	6.31	0.0156	0.460	0.240	0.283	0.018	0.022	0.010	0.055	0.081	0.022
July	30	1763	55.0	5.03	0.0131	0.718	0.283	0.174	0.015	<0.001	<0.001	0.022	0.088	0.018
August	32	1158	36.1	5.29	0.0073	0.549	0.243	0.129	0.016	<0.001	0.007	0.015	0.103	0.021
	239	7494	233.8	5.46	0.072	2.991	1.543	1.274	0.141	0.022	0.087	0.170	0.575	0.129

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
2-Sep-1992	16-Sep-1992	14	1563	48.8	5.19	0.0048	0.195	0.109	0.046	0.029	<0.001	0.040	0.015	0.012	<0.001
16-Sep-1992	23-Sep-1992	7	21	0.7	6.18	0.0003	0.010	0.006	0.006	0.001	<0.001	<0.001	0.002	0.003	<0.001
23-Sep-1992	30-Sep-1992	7	102	3.2	5.24	0.0010	0.078	0.046	0.021	0.002	<0.001	0.001	0.001	0.015	0.003
30-Sep-1992	14-Oct-1992	no sample													
14-Oct-1992	21-Oct-1992	7	88	2.7	6.10	0.0010	0.053	0.035	0.021	0.002	<0.001	0.002	0.002	0.018	0.004
21-Oct-1992	28-Oct-1992	7	19	0.6	6.65	0.0004	0.007	0.003	0.007	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
28-Oct-1992	4-Nov-1992	7	69	2.2	5.64	0.0008	0.039	0.029	0.017	0.006	<0.001	0.006	0.001	0.007	0.001
4-Nov-1992	11-Nov-1992	7	165	5.1	6.09	0.0004	0.020	0.015	0.008	0.008	<0.001	0.011	0.003	0.015	0.002
11-Nov-1992	25-Nov-1992	no sample													
25-Nov-1992	2-Dec-1992	7	104	3.2	5.83	0.0005	0.030	0.012	0.010	0.011	<0.001	0.010	0.001	0.009	0.001
2-Dec-1992	16-Dec-1992	no sample													
16-Dec-1992	21-Dec-1992	5	78	2.4	5.55	0.0001	0.008	0.017	0.004	0.002	<0.001	0.001	0.001	0.004	<0.001
21-Dec-1992	28-Dec-1992	7	160	5.0	5.90	0.0002	0.015	0.023	0.006	0.005	<0.001	0.003	0.001	0.010	0.002
28-Dec-1992	5-Jan-1993	8	42	1.3	5.62	0.0000	0.004	0.007	<0.001	0.001	<0.001	<0.001	<0.001	0.002	<0.001
		83	2411	75.2	5.36	0.010	0.459	0.301	0.146	0.067	<0.001	0.073	0.029	0.095	0.014

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	239	7494	233.8	5.46	0.072	2.991	1.543	1.274	0.141	0.022	0.087	0.170	0.575	0.129
weekly	83	2411	75.2	5.36	0.010	0.459	0.301	0.146	0.067	<0.001	0.073	0.029	0.095	0.014
annual	322	9905	309.0	5.43	0.082	3.450	1.844	1.420	0.208	0.022	0.160	0.199	0.670	0.143

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: FORT CHIPEWYAN

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	31	666	20.8	5.37	-0.0001	0.098	0.090	<0.001	0.030	<0.001	0.019	0.016	0.026	0.005
February	42	1020	31.8	5.32	0.0004	0.122	0.131	0.005	0.042	<0.001	0.029	0.014	0.033	0.007
March	22	888	27.7	5.96	0.0003	0.161	0.153	0.027	0.101	<0.001	0.085	0.046	0.063	0.027
April	b	b	b	b	b	b	b	b	b	b	b	b	b	b
May	b	b	b	b	b	b	b	b	b	b	b	b	b	b
June	42	4323	134.9	5.10	0.0097	1.290	0.086	<0.001	0.183	<0.001	0.055	0.158	0.212	0.042
July	29	2995	93.5	5.44	0.0027	0.248	0.060	<0.001	0.039	<0.001	0.017	0.070	0.068	0.012
August	23	4069	127.0	6.31	0.0518	1.153	0.147	0.828	0.956	0.132	0.218	0.611	0.728	0.110
	189	13961	435.6	5.40	0.065	3.071	0.667	0.861	1.351	0.132	0.424	0.915	1.129	0.203

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
1-Sep-1992	16-Sep-1992	no sample													
16-Sep-1992	23-Sep-1992	7	2605	81.3	5.13	0.0045	0.673	0.133	<0.001	0.050	<0.001	0.034	0.045	0.206	0.012
23-Sep-1992	30-Sep-1992	7	2022	63.1	5.05	0.0056	0.423	<0.001	<0.001	0.021	<0.001	0.017	0.010	0.085	0.008
30-Sep-1992	7-Oct-1992	7	1028	32.1	5.57	0.0009	0.619	<0.001	<0.001	0.050	<0.001	0.067	0.036	0.239	0.016
7-Oct-1992	31-Dec-1993	no sample													
		21	5655	176.5	4.83	0.011	1.716	0.133	<0.001	0.120	<0.001	0.119	0.091	0.530	0.037

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	189	13961	435.6	5.40	0.065	3.071	0.667	0.861	1.351	0.132	0.424	0.915	1.129	0.203
weekly	21	5655	176.5	4.83	0.011	1.716	0.133	<0.001	0.120	<0.001	0.119	0.091	0.530	0.037
annual	210	19616	612.1	5.15	0.076	4.787	0.800	0.861	1.471	0.132	0.543	1.006	1.659	0.240

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: FORT MCMURRAY

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	25	179	5.6	5.21	0.0001	0.022	0.022	<0.001	0.007	<0.001	0.004	<0.001	0.004	<0.001
February	25	171	5.3	4.93	0.0002	0.046	0.076	0.007	0.016	<0.001	0.010	<0.001	0.010	0.002
March	32	272	8.5	5.26	0.0011	0.108	0.121	0.032	0.011	<0.001	0.006	0.002	0.030	0.007
April	30	557	17.4	4.98	0.0039	0.248	0.110	0.052	0.012	<0.001	0.012	0.005	0.036	0.009
May	32	598	18.7	4.51	0.0083	0.597	0.190	0.074	0.015	<0.001	0.009	0.008	0.075	0.019
June	28	2447	76.4	4.79	0.0120	0.750	0.350	0.055	0.018	<0.001	0.012	0.022	0.105	0.025
July	29	1568	48.9	4.62	0.0147	1.000	0.274	0.095	0.022	<0.001	0.028	0.018	0.081	0.017
August	36	1917	59.8	4.66	0.0136	0.813	0.278	0.057	0.031	<0.001	0.018	0.014	0.045	0.014
	237	7709	240.6	4.72	0.054	3.584	1.420	0.372	0.132	<0.001	0.099	0.068	0.386	0.094

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
3-Sep-1992	16-Sep-1992	13	690	21.5	5.66	0.0026	0.128	0.062	0.044	0.011	<0.001	0.006	0.052	0.011	0.004
16-Sep-1992	22-Sep-1992	6	92	2.9	4.46	0.0010	0.054	0.014	0.002	0.002	<0.001	0.001	<0.001	0.003	<0.001
22-Sep-1992	1-Oct-1992	8	918	28.6	4.43	0.0101	0.556	0.073	0.004	0.008	<0.001	0.005	<0.001	0.011	<0.001
1-Oct-1992	7-Oct-1992	no sample													
7-Oct-1992	16-Oct-1992	9	117	3.7	4.62	0.0009	0.055	<0.001	<0.001	0.001	<0.001	0.001	0.001	0.005	0.001
16-Oct-1992	21-Oct-1992	5	114	3.6	5.05	0.0003	0.013	0.012	0.001	0.003	<0.001	0.002	<0.001	0.003	0.001
21-Oct-1992	27-Oct-1992	6	10	0.3	4.50	0.0001	0.005	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
27-Oct-1992	5-Nov-1992	9	185	5.8	4.93	0.0007	0.026	0.046	0.009	0.003	<0.001	0.003	<0.001	0.003	<0.001
5-Nov-1992	18-Nov-1992	13	213	6.6	4.91	0.0010	0.049	0.063	0.014	0.004	<0.001	0.002	<0.001	0.008	0.001
18-Nov-1992	27-Nov-1992	9	49	1.5	4.56	0.0005	0.021	0.020	0.006	0.003	<0.001	0.002	<0.001	0.001	<0.001
27-Nov-1992	10-Dec-1992	13	50	1.6	4.67	0.0003	0.011	0.010	0.001	0.005	<0.001	0.003	<0.001	0.002	<0.001
10-Dec-1992	16-Dec-1992	6	30	0.9	5.06	0.0001	0.004	0.005	<0.001	0.004	<0.001	0.002	<0.001	0.002	<0.001
16-Dec-1992	31-Dec-1992	no sample													
		97	2468	77.0	4.73	0.018	0.924	0.310	0.082	0.044	<0.001	0.027	0.053	0.049	0.008

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	237	7709	240.6	4.72	0.054	3.584	1.420	0.372	0.132	<0.001	0.099	0.068	0.386	0.094
weekly	97	2468	77.0	4.73	0.018	0.924	0.310	0.082	0.044	<0.001	0.027	0.053	0.049	0.008
annual	334	10177	317.6	4.72	0.072	4.508	1.730	0.454	0.176	<0.001	0.126	0.121	0.435	0.102

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: FORT VERMILION

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	29	408	12.7	5.84	-0.0003	0.084	0.088	0.008	0.029	<0.001	0.022	0.005	0.021	0.003
February	28	188	5.9	6.40	-0.0003	0.161	0.105	0.013	0.130	0.018	0.030	0.253	0.220	0.054
March	b	b	b	b	b	b	b	b	b	b	b	b	b	b
April	30	217	6.8	6.97	-0.0007	0.158	0.078	0.003	0.040	<0.001	0.020	0.006	0.173	0.019
May	30	573	17.9	5.40	0.0008	0.153	0.063	0.012	0.028	<0.001	0.026	0.006	0.046	0.008
June	29	1768	55.2	5.13	0.0028	0.226	0.112	<0.001	0.028	<0.001	0.017	0.032	0.052	0.010
July	31	698	21.8	5.01	0.0024	0.159	0.106	0.023	0.024	<0.001	0.015	0.013	0.042	0.007
August	31	2098	65.5	5.07	0.0042	0.342	0.118	<0.001	0.037	<0.001	0.026	0.016	0.054	0.011
	208	5950	185.7	5.16	0.009	1.282	0.671	0.060	0.315	0.018	0.155	0.331	0.607	0.112

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
3-Sep-1992	23-Sep-1992	20	956	29.8	5.49	0.0012	0.060	0.027	0.009	0.014	<0.001	0.010	0.006	0.016	<0.001
23-Sep-1992	30-Sep-1992	7	629	19.6	5.17	0.0014	0.086	0.032	0.007	0.014	<0.001	0.012	0.008	0.010	<0.001
30-Sep-1992	14-Oct-1992	no sample													
14-Oct-1992	21-Oct-1992	7	91	2.8	5.14	0.0002	0.011	0.016	0.003	0.002	<0.001	0.002	0.001	0.005	0.001
21-Oct-1992	28-Oct-1992	7	42	1.3	6.58	0.0002	0.007	0.006	0.005	0.013	<0.001	0.011	0.004	0.002	<0.001
28-Oct-1992	4-Nov-1992	7	102	3.2	4.87	0.0005	0.031	0.045	0.010	0.005	<0.001	0.004	0.003	0.006	<0.001
4-Nov-1992	11-Nov-1992	7	223	7.0	6.09	0.0003	0.034	0.033	0.010	0.176	<0.001	0.113	0.048	0.018	0.003
12-Nov-1992	18-Nov-1992	6	208	6.5	4.90	0.0010	0.062	0.050	0.012	0.017	<0.001	0.016	0.004	0.008	<0.001
18-Nov-1992	25-Nov-1992	7	63	2.0	5.05	0.0001	0.004	0.017	0.001	0.003	<0.001	0.002	<0.001	0.002	<0.001
25-Nov-1992	30-Dec-1992	35	24	0.7	5.12	0.0000	0.001	0.005	<0.001	0.004	<0.001	0.003	0.001	<0.001	<0.001
		103	2338	73.0	5.32	0.005	0.295	0.231	0.055	0.250	<0.001	0.173	0.076	0.067	0.005

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	208	5950	185.7	5.16	0.009	1.282	0.671	0.060	0.315	0.018	0.155	0.331	0.607	0.112
weekly	103	2338	73.0	5.32	0.005	0.295	0.231	0.055	0.250	<0.001	0.173	0.076	0.067	0.005
annual	311	8288	258.7	5.20	0.014	1.577	0.902	0.115	0.565	0.018	0.328	0.407	0.674	0.117

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: HIGH PRAIRIE

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	30	560	17.5	5.41	0.0008	0.044	0.078	0.016	0.005	<0.001	0.004	0.004	0.012	0.002
February	28	65	2.0	4.90	-0.0001	0.013	0.035	0.001	0.003	<0.001	0.001	0.001	0.005	0.001
March	30	208	6.5	5.14	0.0003	0.039	0.052	0.006	0.003	<0.001	0.002	0.002	0.006	0.001
April	29	713	22.2	5.19	0.0071	0.344	0.205	0.125	0.009	<0.001	0.007	0.017	0.049	0.008
May	30	76	2.4	7.16	0.0057	0.156	0.061	0.100	0.018	0.101	0.003	0.101	0.026	0.019
June	29	1421	44.3	4.92	0.0034	0.428	0.228	0.010	0.016	<0.001	0.009	0.048	0.090	0.020
July	30	1926	60.1	5.15	0.0042	0.341	0.163	0.028	0.027	<0.001	0.012	0.047	0.055	0.011
August	30	930	29.0	5.15	0.0018	0.122	0.054	0.006	0.015	<0.001	0.011	0.013	0.018	0.005
	236	5899	184.1	5.10	0.023	1.487	0.875	0.292	0.096	0.101	0.050	0.233	0.260	0.067

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
1-Sep-1992	15-Sep-1992	14	1463	45.7	5.05	0.0038	0.209	0.098	0.012	0.013	<0.001	0.022	0.016	0.021	0.005
16-Sep-1992	23-Sep-1992		660	20.6	5.11	0.0014	0.079	0.018	<0.001	0.005	<0.001	0.003	0.007	0.011	0.002
23-Sep-1992	30-Sep-1992		148	4.6	4.77	0.0009	0.056	0.045	0.009	0.004	<0.001	0.004	0.002	0.009	0.001
30-Sep-1992	8-Oct-1992	8	28	0.9	6.56	0.0000	0.008	<0.001	<0.001	0.001	<0.001	0.001	0.006	0.015	0.003
-Oct-1992	14-Oct-1992	no sample													
14-Oct-1992	21-Oct-1992	7	28	0.9	8.01	0.0009	0.053	0.032	0.019	0.032	0.001	0.026	0.037	0.082	0.005
21-Oct-1992	28-Oct-1992	no sample													
28-Oct-1992	4-Nov-1992	7	182	5.7	6.59	0.0003	0.043	0.027	0.009	0.007	<0.001	0.004	0.004	0.079	0.005
4-Nov-1992	11-Nov-1992	7	29	0.9	5.87	-0.0001	0.007	0.014	0.001	<0.001	<0.001	<0.001	<0.001	0.007	<0.001
11-Nov-1992	18-Nov-1992	7	128	4.0	7.13	-0.0004	0.009	0.035	<0.001	0.003	<0.001	0.003	0.004	0.127	0.002
18-Nov-1992	25-Nov-1992	7	98	3.1	7.03	-0.0001	0.004	0.014	<0.001	<0.001	<0.001	<0.001	0.001	0.050	<0.001
25-Nov-1992	9-Dec-1992	no sample													
9-Dec-1992	16-Dec-1992	7	12	0.4	6.86	0.0000	0.002	<0.001	a	<0.001	<0.001	a	a	a	a
16-Dec-1992	23-Dec-1992	7	59	1.8	6.91	0.0000	0.008	0.001	<0.001	0.002	<0.001	0.002	<0.001	0.020	0.001
23-Dec-1992	30-Dec-1992	7	191	6.0	6.19	0.0000	0.012	0.005	<0.001	0.003	<0.001	0.002	0.001	0.023	0.002
30-Dec-1992	6-Jan-1993	7	118	3.7	6.26	0.0000	0.011	0.002	<0.001	0.003	<0.001	0.002	0.001	0.024	0.001
		99	3144	98.1	5.11	0.007	0.500	0.291	0.051	0.072	0.001	0.069	0.079	0.469	0.027

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	236	5899	184.1	5.10	0.023	1.487	0.875	0.292	0.096	0.101	0.050	0.233	0.260	0.067
weekly	99	3144	98.1	5.11	0.007	0.500	0.291	0.051	0.072	0.001	0.069	0.079	0.469	0.027
annual	335	9043	282.2	5.11	0.030	1.987	1.166	0.343	0.168	0.102	0.119	0.312	0.729	0.094

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: KANANASKIS

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	31	618	19.3	5.46	0.0008	0.058	0.056	0.012	0.008	<0.001	0.005	<0.001	0.032	0.005
February	29	108	3.4	5.66	0.0004	0.057	0.071	0.018	0.005	<0.001	0.003	0.002	0.025	0.005
March	31	518	16.2	5.01	0.0031	0.254	0.196	0.058	0.027	<0.001	0.018	0.003	0.056	0.011
April	30	554	17.3	5.86	0.0008	0.157	0.202	0.044	0.023	<0.001	0.015	0.005	0.075	0.014
May	31	3330	103.9	6.10	0.0086	1.033	0.675	0.241	0.042	<0.001	0.027	0.018	0.480	0.092
June	30	6015	187.7	4.91	0.0272	1.620	0.781	0.203	0.038	<0.001	0.028	0.041	0.238	0.056
July	31	3804	118.7	4.89	0.0124	1.090	0.489	0.042	0.045	<0.001	0.019	0.019	0.218	0.043
August	31	919	28.7	5.30	0.0037	0.369	0.239	0.077	0.027	<0.001	0.011	0.015	0.098	0.021
	244	15866	495.1	5.06	0.057	4.637	2.709	0.694	0.215	<0.001	0.126	0.103	1.223	0.247

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
1-Sep-1992	16-Sep-1992	15	2084	65.0	4.98	0.0066	0.401	0.201	0.033	0.014	<0.001	<0.001	0.007	0.056	0.013
16-Sep-1992	23-Sep-1992	7	15	0.5	5.05	0.0000	0.005	<0.001	<0.001	<0.001	0.002	<0.001	0.002	0.002	<0.001
23-Sep-1992	30-Sep-1992	7	63	2.0	5.99	-0.0001	0.011	0.014	<0.001	0.001	<0.001	0.001	<0.001	0.012	0.003
30-Sep-1992	7-Oct-1992	7	482	15.0	4.74	0.0032	0.185	0.115	0.028	0.005	<0.001	0.005	0.003	0.028	0.004
7-Oct-1992	14-Oct-1992	7	546	17.0	5.00	0.0012	0.086	0.077	0.005	0.010	<0.001	0.010	0.005	0.026	0.006
14-Oct-1992	21-Oct-1992	7	325	10.1	4.68	0.0010	0.036	0.157	0.010	0.007	<0.001	0.004	0.003	0.007	0.004
21-Oct-1992	28-Oct-1992	7	99	3.1	5.50	0.0002	0.037	0.018	0.005	0.004	<0.001	0.003	0.001	0.013	0.003
28-Oct-1992	4-Nov-1992	7	98	3.1	5.12	0.0003	0.042	0.017	0.004	0.003	<0.001	0.002	<0.001	0.012	0.001
4-Nov-1992	11-Nov-1992	7	281	8.8	4.95	0.0008	0.041	0.039	0.004	0.002	<0.001	0.004	0.001	0.007	0.001
11-Nov-1992	18-Nov-1992	7	130	4.1	4.78	0.0007	0.029	0.064	0.012	0.002	<0.001	0.002	<0.001	0.004	<0.001
18-Nov-1992	25-Nov-1992	7	44	1.4	5.83	-0.0000	0.003	0.012	0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.002
25-Nov-1992	9-Dec-1992	no sample													
9-Dec-1992	16-Dec-1992	7	150	4.7	6.25	0.0008	0.024	0.032	0.018	0.036	0.002	0.022	0.012	0.016	0.003
16-Dec-1992	30-Dec-1992	14	250	7.8	6.17	-0.0004	0.022	0.057	0.004	0.003	<0.001	0.002	0.002	0.040	0.009
30-Dec-1992	6-Jan-1993	7	49	1.5	5.38	-0.0001	0.004	0.018	0.001	0.002	<0.001	0.001	<0.001	0.005	<0.001
		113	4616	144.0	4.74	0.014	0.925	0.823	0.125	0.090	0.004	0.056	0.037	0.230	0.050

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	244	15866	495.1	5.06	0.057	4.637	2.709	0.694	0.215	<0.001	0.126	0.103	1.223	0.247
weekly	113	4616	144.0	4.74	0.014	0.925	0.823	0.125	0.090	0.004	0.056	0.037	0.230	0.050
annual	357	20482	639.1	4.96	0.071	5.562	3.532	0.819	0.305	0.004	0.182	0.140	1.453	0.297

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: RED DEER

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	29	252	7.9	5.48	0.0019	0.077	0.119	0.046	0.006	<0.001	0.004	0.002	0.016	0.003
February	32	184	5.7	5.35	0.0011	0.051	0.085	0.028	0.005	<0.001	0.002	<0.001	0.014	0.003
March	28	33	1.0	5.32	0.0004	0.080	0.044	0.013	0.004	<0.001	0.003	<0.001	0.013	b
April	30	356	11.1	6.50	0.0100	0.044	0.293	0.208	0.012	<0.001	0.008	0.003	0.094	0.017
May	31	1508	47.1	5.67	0.0140	0.751	0.532	0.298	0.016	<0.001	0.017	0.014	0.129	0.023
June	35	2410	75.2	5.06	0.0168	1.189	0.631	0.272	0.029	<0.001	0.018	0.028	0.196	0.042
July	25	1273	39.7	4.99	0.0101	0.639	0.350	0.156	0.012	<0.001	0.005	0.011	0.086	0.017
August	32	544	17.0	5.84	0.0041	0.360	0.196	0.096	0.010	<0.001	0.006	0.009	0.087	0.020
	242	6560	204.7	5.22	0.058	3.190	2.250	1.116	0.094	<0.001	0.062	0.066	0.634	0.124

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
1-Sep-1992	17-Sep-1992	18	1669	52.1	5.40	0.0073	0.451	0.379	0.149	0.016	<0.001	<0.001	0.009	0.092	0.017
17-Sep-1992	25-Sep-1992	8	48	1.5	6.66	0.0008	0.034	0.016	0.015	0.001	<0.001	<0.001	0.001	0.007	0.001
25-Sep-1992	7-Oct-1992	12	454	14.2	5.01	0.0029	0.265	0.117	0.045	0.008	<0.001	0.006	0.008	0.052	0.008
7-Oct-1992	21-Oct-1992	14	178	5.6	5.30	0.0021	0.097	0.032	0.034	0.002	<0.001	0.001	0.002	0.012	0.003
21-Oct-1992	28-Oct-1992	no sample													
28-Oct-1992	4-Nov-1992	7	228	7.1	5.55	0.0023	0.095	0.083	0.048	0.003	<0.001	0.003	0.002	0.009	0.001
4-Nov-1992	12-Nov-1992	8	85	2.7	5.35	0.0008	0.046	0.019	0.015	0.001	<0.001	0.001	0.001	0.005	<0.001
12-Nov-1992	18-Nov-1992	6	122	3.8	5.61	0.0004	0.011	0.030	0.010	0.003	<0.001	0.003	0.003	0.003	<0.001
18-Nov-1992	25-Nov-1992	7	57	1.8	5.28	0.0004	0.007	0.009	0.006	<0.001	<0.001	<0.001	<0.001	0.001	<0.001
25-Nov-1992	2-Dec-1992	7	133	4.2	6.16	0.0009	0.028	0.012	0.016	0.001	<0.001	0.001	0.001	0.003	<0.001
2-Dec-1992	9-Dec-1992	no sample													
9-Dec-1992	16-Dec-1992	7	66	2.1	5.33	0.0001	0.006	0.019	0.003	0.001	<0.001	0.001	0.001	0.003	<0.001
16-Dec-1992	24-Dec-1992	8	73	2.3	5.31	0.0001	0.012	0.021	0.003	0.002	<0.001	<0.001	0.002	0.005	0.001
24-Dec-1992	30-Dec-1992	6	174	5.4	5.16	0.0004	0.020	0.037	0.007	0.003	<0.001	0.002	0.002	0.006	0.001
		108	3287	102.6	5.24	0.019	1.072	0.773	0.351	0.041	<0.001	0.019	0.033	0.198	0.033

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	242	6560	204.7	5.22	0.058	3.190	2.250	1.116	0.094	<0.001	0.062	0.066	0.634	0.124
weekly	108	3287	102.6	5.24	0.019	1.072	0.773	0.351	0.041	<0.001	0.019	0.033	0.198	0.033
annual	350	9847	307.3	5.22	0.077	4.262	3.023	1.467	0.135	<0.001	0.081	0.099	0.832	0.157

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: VEGREVILLE

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	b	b	b	b	b	b	b	b	b	b	b	b	b	b
February	28	8	0.2	a	b	b	b	0.003	<0.001	<0.001	<0.001	<0.001	b	b
March	31	61	1.9	5.80	0.0016	0.077	0.048	0.033	0.007	<0.001	0.019	0.001	0.006	0.001
April	30	497	15.5	6.44	0.0064	0.164	0.194	0.133	0.010	<0.001	0.008	0.008	0.049	0.011
May	32	663	20.7	6.02	0.0106	0.439	0.314	0.219	0.013	<0.001	0.016	0.011	0.065	0.014
June	29	649	20.3	5.55	0.0040	0.252	0.190	0.087	0.009	<0.001	0.007	0.013	0.061	0.012
July	31	2271	70.9	5.67	0.0254	0.889	0.611	0.482	0.021	<0.001	0.013	0.021	0.079	0.016
August	31	1454	45.4	4.77	0.0122	0.853	0.495	0.157	0.023	<0.001	0.013	0.014	0.144	0.028
September	30	469	14.6	5.38	0.0051	0.275	0.216	0.108	0.007	<0.001	0.004	0.005	0.036	0.007
October	30	98	3.1	4.85	0.0011	0.093	0.092	0.026	0.006	<0.001	0.005	0.004	0.024	0.005
November	31	74	2.3	5.54	0.0011	0.043	0.038	0.023	0.003	<0.001	0.002	0.002	0.005	0.001
December	31	148	4.6	5.90	0.0001	0.026	0.053	0.010	0.004	<0.001	0.002	0.002	0.004	<0.001
Annual	334	6392	199.4546	5.25	0.068	3.112	2.251	1.281	0.104	<0.001	0.087	0.081	0.473	0.095

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

ACID PRECIPITATION MONITORING RESULTS
YEAR: 1992
STATION: SUFFIELD

MONTHLY SAMPLES

Month	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
January	29	245	7.6	5.71	0.0008	0.035	0.058	0.021	0.008	<0.001	0.006	0.004	0.019	0.005
February	29	15	0.5	5.09	0.0000	b	b	b	b	b	<0.001	0.001	b	b
March	b	b	b	b	b	b	b	b	b	b	b	b	b	b
April	30	336	10.5	6.39	0.0039	0.231	0.239	0.102	0.013	<0.001	0.012	0.010	0.071	0.019
May	31	1437	44.8	5.81	0.0086	0.523	0.527	0.216	0.029	<0.001	0.035	0.020	0.138	0.032
June	30	1735	54.1	5.30	0.0115	0.943	0.698	0.261	0.034	<0.001	0.043	0.029	0.195	0.057
July	31	1698	53.0	5.19	0.0055	0.482	0.498	0.120	0.023	<0.001	0.022	0.010	0.116	0.033
August	31	1396	43.6	6.07	0.0046	0.283	0.259	0.112	0.074	<0.001	0.056	0.047	0.110	0.033
	211	6862	214.1	5.46	0.035	2.498	2.280	0.832	0.181	<0.001	0.173	0.121	0.648	0.179

WEEKLY SAMPLES

Sample Start Date	Sample End Date	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
1-Sep-1992	16-Sep-1992	15	503	15.7	5.57	0.0011	0.159	0.131	0.034	0.027	<0.001	0.020	0.019	0.044	0.011
16-Sep-1992	23-Sep-1992	7	116	3.6	5.46	0.0003	0.036	0.031	0.008	0.006	<0.001	0.005	0.004	0.010	0.002
23-Sep-1992	30-Sep-1992	7	130	4.1	5.30	0.0003	0.026	0.021	0.005	0.002	<0.001	0.002	<0.001	0.007	0.002
30-Sep-1992	7-Oct-1992	7	36	1.1	4.74	0.0005	0.037	0.038	0.012	0.002	<0.001	0.002	0.001	0.009	0.002
7-Oct-1992	14-Oct-1992	7	102	3.2	5.43	0.0005	0.036	0.030	0.012	0.002	<0.001	0.003	0.001	0.006	0.001
14-Oct-1992	21-Oct-1992	no sample													
21-Oct-1992	28-Oct-1992	7	20	0.6	6.99	0.0006	0.037	0.040	0.016	0.005	<0.001	0.005	0.005	0.012	0.002
28-Oct-1992	4-Nov-1992	7	664	20.7	5.21	0.0003	0.086	0.103	0.003	0.007	<0.001	0.004	0.007	0.047	0.007
4-Nov-1992	11-Nov-1992	7	149	4.6	6.13	0.0013	0.044	0.033	0.026	0.005	<0.001	0.006	0.003	0.012	0.003
11-Nov-1992	18-Nov-1992	7	11	0.3	5.39	0.0000	0.001	0.002	<0.001	0.002	<0.001	0.002	<0.001	<0.001	<0.001
18-Nov-1992	25-Nov-1992	7	52	1.6	6.09	-0.0002	0.008	0.019	<0.001	0.001	<0.001	0.002	0.001	0.008	0.002
25-Nov-1992	2-Dec-1992	7	27	0.8	6.14	0.0010	0.045	0.040	0.023	0.005	<0.001	0.005	0.003	0.008	0.002
2-Dec-1992	9-Dec-1992	no sample													
9-Dec-1992	17-Dec-1992	8	13	0.4	7.14	0.0010	a	a	0.015	a	a	0.003	0.002	0.009	0.002
17-Dec-1992	6-Jan-1993	20	26	0.8	7.08	0.0002	0.008	0.012	0.004	0.002	<0.001	0.002	0.001	0.008	0.002
		113	1849	57.7	5.54	0.007	0.523	0.500	0.157	0.064	<0.001	0.059	0.048	0.180	0.038

ANNUAL SUMMARY

	Sample Period (days)	Catch of Collector (ml)	Precip. Depth* (mm)	pH	Effective Acidity (H+ kg/ha)	Sulphate (kg/ha)	Nitrate (kg/ha)	Ammonium (kg/ha)	Chloride (kg/ha)	Phosphate (kg/ha)	Sodium (kg/ha)	Potassium (kg/ha)	Calcium (kg/ha)	Magnesium (kg/ha)
monthly	211	6862	214.1	5.46	0.035	2.498	2.280	0.832	0.181	<0.001	0.173	0.121	0.648	0.179
weekly	113	1849	57.7	5.54	0.007	0.523	0.500	0.157	0.064	<0.001	0.059	0.048	0.180	0.038
annual	324	8711	271.8	5.48	0.042	3.021	2.780	0.989	0.245	<0.001	0.232	0.169	0.828	0.217

* Precipitation depth is calculated directly from the catch of collector: i.e. precip. depth [mm] = 0.031204*catch of collector [ml].
a insufficient sample for analysis
b data not available

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